

Tales of Walnut Hill



By Robert Summa

Volume 8



Welcome to the Tales of Walnut Hill

We have a rich history we will share as you read this book. We will look at the past and the all-time greats that left their mark on the history of Walnut Hill: the masters of rifle shooting and pistol shooting. They generated the spirit of the Hill through competitive shooting. What they built and shot was a challenge. They were the distinguished shooters of the Hill. They came from all over the country to shoot at

Walnut Hill. We have Harry Pope, the greatest barrel maker of his time and a master rifle shooter. We have Niedner, an all-time great, a master rifle shooter, and one of the top gunsmiths of his time who chased Geronamo all over the southwest in the 6th Calvary. Then there is Dr. Mann, the father of ballistics, who in 1909 published *The Bullet's Flight* in his quest for the magic bullet and the magic barrel for the perfect score with the perfect rifle. He was a medical doctor and gave up his practice for his quest in ballistics. Then there are D. L. F. Chase, Ned Roberts, Horace Warner, H. V. Perry, Norman Brockway, C. W. Rowland, H. L. Willard, E. A. Leopold, W. V. Lowe, the Russell brothers, Arthur Corbin Gould, N. C. Nash, O. E. Gerrish, John Kelley, Will Hayes, Dr. W. G. Hudson, the great offhand shot Adolph Strecker, Dr. Bakery, L. P. Hansen, Young, Mr. Fry, Daniel Fox, Major Hinman, F.J. Rabbeth and Professor Bell. All are the masters of the rifle. The masters of pistol are C. Paine, Tom Anderton, Eugene Partridge, and Dorothy Knight at Walnut Hill. The riflemen of the Hill, having looked at the American militia team's defeat at Creedmoor, decided to do something about it, so they trained a militia rifle team. Some were members of Walnut Hill and knew the game of long range shooting, and were sent to Creedmoor where they won every event entered. The Walnut Hill riflemen were men of stature: doctors, engineers, and masters of their trade. They were men that enjoyed the shooting sport and did all they could to preserve it for the future generations to come. They shot offhand at ranges of 600, 800, 900, and 1000 yards, holding the finest rifles of their day. H. Pope was the father of the game twist rifle barrel. Pope and Niedner made barrels for Dr. Mann.

All proceeds from the selling of these books will go to the Massachusetts Rifle Association to preserve the history of the M.R.A. through our Museum. If you can help, I thank you. I am looking for old photos of Walnut Hill to share with our membership. The one thing I have learned about history: if someone does not record it, it is lost for all time. But these books will present a vast history which we will share with the world. As you read and look at all the photos, know the books will be a treasure for future generations after we have all come and gone. The books detail the Tales of Walnut Hill. And we will only print 100 books in each series, for this is truly a limited edition!

Robert Summa
M.R.A. Historian at the Walnut Hill Range

The Massachusetts Rifle Association Tales of Walnut Hill

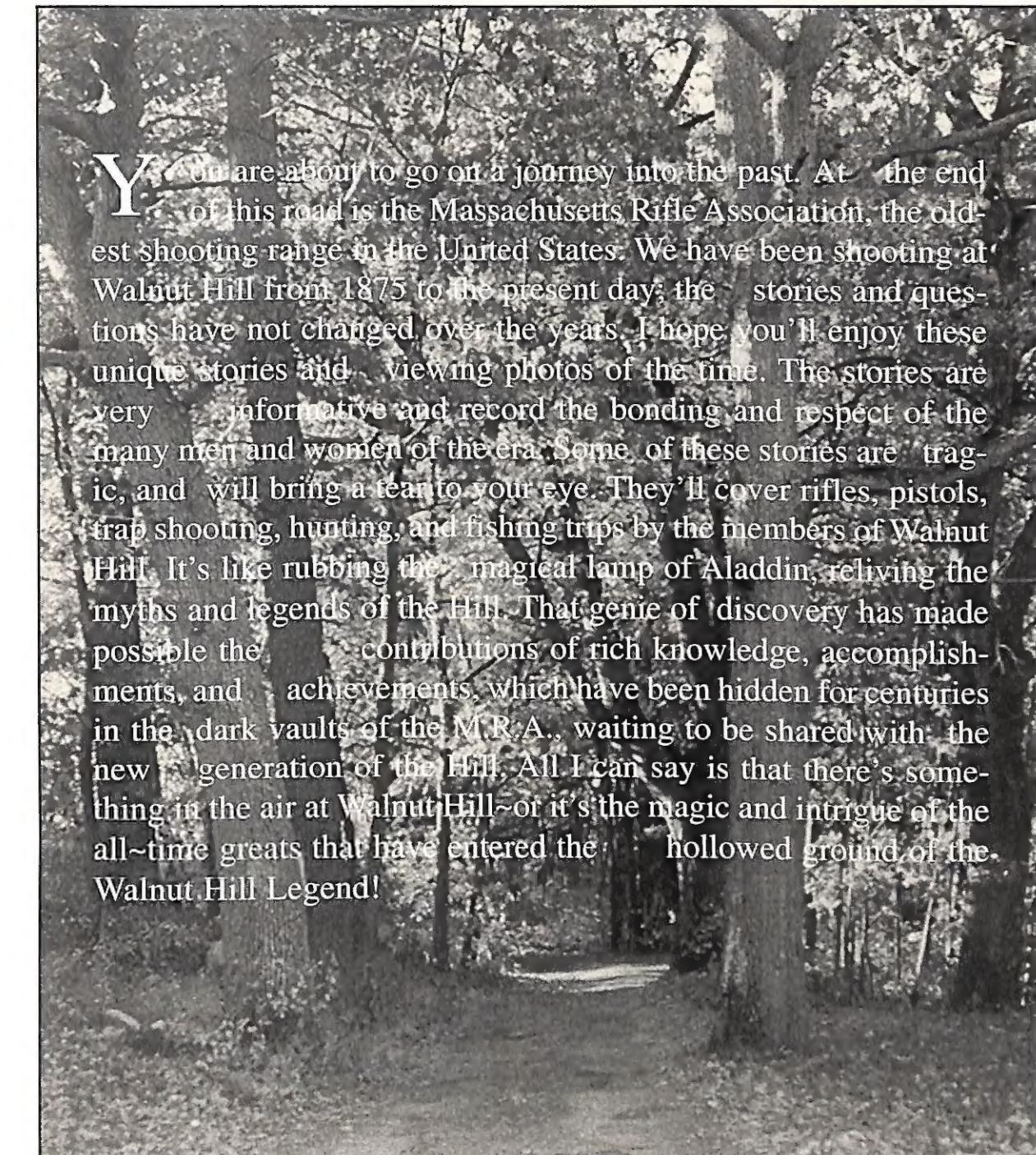
Volume 8

I dedicate this book
to
The Men and Women of Walnut Hill.

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Introduction



Walnut Hill Gleaning

October 22, 1898. With the return of the various regiments from their tour of duty the range begins to assume a more natural appearance.

J. H. Keough is expected home shortly; in fact is reported to be on the way home from Porto Rico, where he has been half fed with the remainder of the Sixth Massachusetts Volunteers. Needless to say Jim will receive the glad hand.

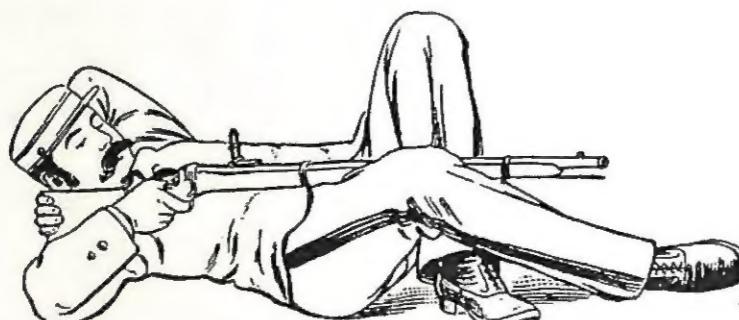
Apropos of that female rough rider story, I had the curiosity to inquire among the staff of the newspaper which published the article, and discovered that the one in charge of that column is a member of the Press Rifle Association, and moreover, is a frequent visitor at Walnut Hill.

Two specimens from the shores of sunny Italy were rounded up in the Middlesex Fells park last week with several robins and a woodpecker in their possession. They were fined \$90 and costs for their fun, which will, perhaps, deter them from future excursions. Considerable trouble has been experienced from this source, and the officers are determined to punish all offenders to the extent of the law. The law prohibits the carrying of a gun in any form into the reservation.

Immediately an Italian becomes the possessor of a gun which will carry shot he go's to the suburbs (usually several of him), and everything wearing wings is game to him. He has a charming disregard of the value of human life, and I venture the opinion that Game Warden Tooker did perfectly right, not perhaps in killing the Italian, but a man who is not an expert with a revolver is as likely to kill as disable an adversary when he has to shoot in a hurry.

Beastly weather Oct. 22. Humphrey gave up shooting in disgust, saying it was about the worst day he ever saw. Kelly kept pegging away, and by close attention to his wind gauge, with a combination of luck and fine holding, turned out 223 and 228 consecutively, in the order named.

The association has recently had an addition to the ranks of its rest shooters in the person of Dr. H. A. Baker, a former member of the scatter gun persuasion. Dr. Baker made, on his first score under the tuition of H. L. Willard, 117 points on the Standard rest target. On the next shoot day he made, uncoached, 115 points, both of these being made with Willard's 120 rifle. Appreciating the fact that he had a good thing, the doctor insisted upon retaining the rifle, and in the end Willard had to sell. W. F. Spencer.



Back shooting

Walnut Hill Gleaning

January 1, 1899. Welcome, The first shoot of the year was surprisingly well attended, although, owing to the attentions of old Boreas, the scores do not by their number arrest the attention of the observer, the reason being that about 80 per cent had a highly ornate where the last shot should be. As was remarked by one of the members, "It is a good day to visit but not to shoot." It may be sufficient to add that the .38 calibers had 2 1/2 points of wind on.

There seems to be some doubt as to the record on the German ring target. If the shooters who think 239 is on top will examine the last column on page 295 of *Shooting and Fishing*, Vol. 18, No. 15, Aug. 1, 1895, they will find a score, shot by O. C. Boyce July 28, in a 50 shot sweepstake, as follows: 23, 25, 24, 23, 24, 25, 23, 25, 23, 25=240. I am rather surprised at Joe Felix for not recollecting this, as he was top man in the match, which was a four-cornered one between Boyce, Hansen, Kraus, and him-self, for the dinners.

The M. R. A. laments the loss of one of the crack rest shots, H. L. Willard; not by death, however, but because of his three 120's. It has taken all of the interest out of the sport for him. It is some consolation to know that he has several remedies within his grasp in the Columbia target with its possible 10, the German ring with 250, or he might shoot man fashion, offhand, and try for 100, Standard American count, with the others to fall back on if he makes it too often.

Perhaps Nash didn't receive congratulations on his Directors' medal score; and he deserved them, too. The matches were shot in a snowstorm which at times prevented the bullseye from being seen through the apertures. In fact, Kelley removed his disk, and shot with the hood for a front sight, making 215 on the ring target.

The present directors' medal was first placed into competition in 1890, and was won by H. S. Harris with a Maynard rifle. Each succeeding match has also been won with the same make of rifle until the two which were shot on Dec. 31. Coombs used a .38-55 Winchester and Nash a .38-50 Ballard, which, although classed as a back number, showed by the score of 85 on a single entry that the new guns are not so far in advance after all.

I was much pleased at seeing in the last number of *Shooting and Fishing* a name which has long been missing from that column, that of G. H. Wentworth. I imagine from his boy's scores that he has already got up considerable interest, I do not see how he could help it, for I do not imagine he has heard anything but rifle since the day he was born. Unfortunately, in some respects, my boy is a girl, or there would be another rifle crank in my family.

On Tuesday, Jan. 10, comes the election of officers of the Massachusetts Rifle Association, after which may be expected to come some new matches to keep up the interest. Several of the members are feeling that a spring meeting is about due, but whether or not it will materialize is another question. It is also desired by a number that the Columbia target be placed on the list of association targets and matches arranged for the same. Having changed from the Standard to the German target with its finer rings, the desire is for something still finer.

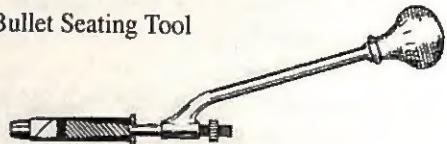
When the Columbia target was first placed before the rifle shooting fraternity, a prominent rifleman was loud in his ridicule of the center ring, claiming it was altogether too small; that, as the possible had yet to be made on the Standard target, the 3-inch ring was small enough; that even 10's were largely a matter of luck offhand, and that for a man to pretend to call for 12's on the Columbia or 25's on the ring target was the height of foolishness. Twenty-fives, ones, and tens may be, and under some conditions undoubtedly are, largely a matter of luck, but when a man repeatedly calls them and the marker agrees with him, it is evident there is something besides luck back of it.

Times change, and the capabilities of rifle, ammunition, and shooter as well. Years ago the Creedmoor target was considered fine enough, and important matches have been won on scores of 44 and 45. The above score of O. C. Boyce, in comparison, contains a possible 100 on the Standard target, while scores, all the shots of which are in an 8-inch circle, are quite common. On as bad a day as yesterday (Jan. 7) proved, J. E. Kelley, in thirty consecutive shots, had only two out of the 8-inch ring, if such shooting is chance, the shooters must be born under a lucky star.

The same Creedmoor target is considered fine enough for the military rifle, but in a recent cup match on the Standard target, open only to active members of the Massachusetts Volunteer Militia, the winner had, among others, ten five-shot scores counting from 43 to 46, and one competitor even reached 49. And yet the United States government retrograded to the extent of using the silhouette targets, on which a boy might make a clean score with a sling-shot.

I am in favor of giving a man a small mark to shoot at, to make him hustle. Even if he is only supposed to hit an object the size of a man, as in the military requirements; if he is used to hitting a 3-inch circle, he will probably locate one or more such circles on the person of his opponent, which recalls the story of the duelists. One of them being an enormously stout man and the other extremely diminutive in size, the former complained that the other had the advantage by reason of having a larger target; the other proposed that his figure be outlined on the stout man's person in chalk, and any shots going outside of the line did not count.

Bullet Seating Tool



The Ideal Ball Seater could be used with the standard paper patched bullet, Chase patched bullet or a grooved bullet. Its function was to seat the bullet in the barrel ahead of a charged cartridge case. As shown in the illustration, the Ball Seater was essentially a dummy cartridge case with a plunger and handle. The Bullet was placed in the dummy case and the entire unit inserted into the chamber of the rifle. A gentle but firm push on the handle seated the bullet in the barrel to a predetermined depth.

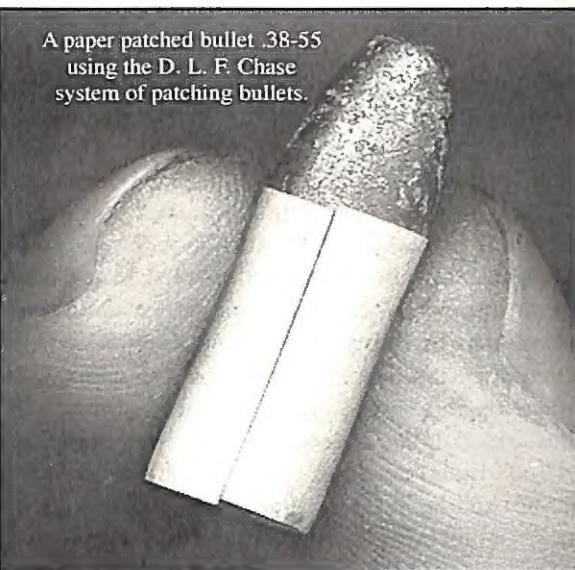


Photo of Bob Summa's fingers holding a paper patched bullet.

What, Another New Gun



Rest shooting by D. L. F. Chase at Walnut Hill 1885

Walnut Hill Gleaning

October 29, 1898. J. H. Keough visited the range on Oct. 29, finding it impossible to stay away, although he has been ashore but two days. He showed few signs of his Cuban campaign, except that he had gained a few pounds in weight while away. Following all the newspaper talk of the inferiority of the Springfield rifle in action, it was interesting to note that Keough still clings to the old Massachusetts arm, as being superior to the small bore rifles in simplicity of construction, accuracy, and death-dealing qualities. He says the Spaniards had a horror of the Springfield arm, and shuddered when one was shown to them; also that the injuries to the Spanish wounded were much more severe than when the small bore rifle was used. He says when a man was hit with a .45 caliber bullet he collapsed at once.

A Mauser repeating pistol was brought to the range by E. E. Patridge on Nov. 5, and was tried by several of the cracks. As only a limited supply of ammunition was at hand, an extended trial was impossible. Dr. Louis Bell tried three shots at 50 yards, the first going high, but the other two counted 8 and respectively.

J. E. Kelly then tried a couple of shots at 200 yards, with the buttstock attached, on the ring target. The sights were held for the first shot touching the ball at 6 o'clock, resulting in a 2 o'clock 16. The next shot was held on the black at 10 o'clock, and produced a 22 at 6 o'clock. It was considered by all to be much superior to the Borchardt which was shown about a year ago.

(see photos on page 10.)

Mr. Rabbeth's rest rifle balked again on that day and threw high shots. To cure the refractory arm a bullet coated with dry emery was resorted to, and about 20 grains of Hazard's FG powder was used as an emetic after the bullet had been upset in the bore. Upon pressing the trigger, only the click of the hammer was heard, but the breech began to get hot, and after a few moments waiting for the gas to escape to some extent, the gun was carefully pointed the other way and the lever thrown down. the shell came out with a bang, and plowed up the planks in great style. A charge of 40 grains was then tried, which ejected the bullet, or what there was left of it, as the inside of the barrel was plastered with lead.

Some surprise was expressed at the barrel standing the severe strain, but Rabbeth said he was informed by one of the Sharps company of a far greater test of strength made by them while testing various kinds of steel for use in their barrels. He was told that they had succeeded in exploding 550 grains of powder in a plugged barrel without bursting the same. This was done several times, but in some cases, where a slight escape of gas occurred, the immense pressure plowed a channel through the hard steel to a considerable depth.

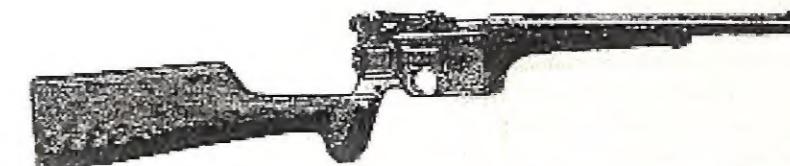
In answer to Hiawandi: The .38 caliber is still at the front, it having been proved, by the experience of most of the members of the Massachusetts Rifle Association, to be superior to any of the smaller bores in accuracy, or rather less susceptible to the variations in the wind pressure, besides being more comfortable to shoot from the shoulder than a larger bored rifle.

The custom of using but one shell is still adhered to, except in one or two cases. Wads are generally used with patched bullets to prevent spilling the powder in the chamber and jamming the shell. Kelley, Coombs, Eastman, and Humphrey all use cannelured bullets weighing from 300 to 319 grains. With a priming of 4 grains Schultze and 40 grains of FG Hazard black powder these bullets seat easily in the shell, with two or three cannelures exposed, and are very accurate, as will be seen by a glance at Kelley's 100-shot string in this issue. These shots were all strung across the bull's-eye laterally, the vertical deviation being very slight. The only rifles with false muzzles used are those of Busfield, Law, and J. S. Sumner. Busfield's is a Pope, Law made his own, and Sumner's is a Zischang.

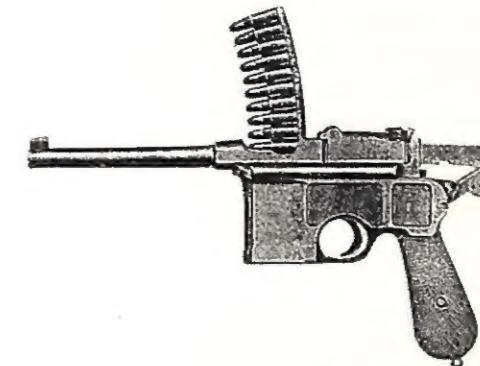
For a Ballard frame, to be used for rest shooting, with patched bullets, a Winchester No. 4 barrel seems to be the general favorite. At any rate, that is what has captured all of the 120's at Walnut Hill. *Boston, W. F. Spencer.*



Borchardt Model 8 Automatic Rifle and Pistol combined



Mauser Pistol 1899 self-loading with Rifle stock



Mauser Pistol 1899 self-loading

The Black Hill's in the early days 1877

April 20, 1877. In the spring of 1877, Yankton, Dak., Sidney, Neb., and Cheyenne, Wyo., were as busy frontier towns as the west ever knew. Teams of prospectors and freighters were coming and going day and night, and the overland stage was loaded to its utmost capacity every morning with passengers bound for Deadwood, the new metropolis of the Black Hills gold fields. It cost seven cents per pound to have freight hauled in by the long wagon trains hauled some by oxen and some by mules. Provisions in Deadwood were high. Everything sold for \$1 per pound-sugar, coffee, salt, bacon, beans, flour, or cornmeal; but it was a long and dangerous road, and enterprising merchants did not feel like risking their all without a chance of good profit, should they be fortunate enough to get their teams in without loss, for the country was infested with Both white outlaws and Indians. Very often the horse and mule teams were turned out at camping time at night and never seen or seldom heard of again, and the owners would not know whether it was white men or Indians who had run the stock off. It was of ten laid to Indians, however, when white men were the culprits.

I was at the famous Spring Valley ranch then, located in the foothills thirty-five miles from Deadwood, wood, and I knew many of the outlaws and road but it was far from the policy of any of the ranchmen to ever know anything about those people should any questions be asked concerning them, for a ranchman who knew too much was very likely to be shot and his ranch burned over his remains. On the other hand, if he attended to his own business, Luff let the road agents' affairs alone, his stock was never molested, and the outlaws spent their money freely whenever they passed, or stopped over night. I was the kid of the ranch then, and I often rather envied those fellows, for they rode the best of saddle horses, always had an abundance of money, and seemed to place so little value on it; and why should they? Any time they were in need of it, all they had to do was to stop a stage, make the passengers get out and line up, and one by one was searched for his ready cash, I have heard the road agents laugh and talk of it when around the ranch as though it were a huge joke.

Later on I was appointed a deputy United States marshal, a position I held for fourteen years in Dakota. I saw many outlaws laying on the bleak cold prairie riddled with bullets, and left where a marshal's posse had overtaken them. I did not envy them so much then, I have a saddle now that was once owned by Jack Campbell, an outlaw. Across the seat of the saddle, cut deep in the leather, is the mark of Jack's spur, the last mark he ever made, and he did that in making a quick exit from the saddle backward with a bullet hole between his eyes. I also have his cartridge belt and knife, all of which are relics of the toughest fight with outlaws I ever participated in. It has ever since been referred to as the Stoneville fight, and occurred at Stones ranch on the Little Missouri river in Montana, just over the Dakota line.

Many are the stories told of the old-time stage holdups in the Black Hills, and one of the most remarkable instances of nerve with which I am acquainted, occurred during one of the fall drives of 1879. It was the same line along which frequent robberies had occurred. The coach left Sidney, Neb., with eight passengers-seven men and one woman. As they journeyed toward Deadwood they conversed among themselves, and each expressed a different opinion as to the probability of a holdup. Some said they would hide their money under the cushions; others would surrender what bills or gold they might possess, while two or three men exhibited revolvers and vowed they would make resistance. The woman said she had only \$100 in the world. She had come west to make a living by keeping a restaurant in the mining camps, and had done very well until fire destroyed her property, and now she was going to the new gold fields to try again. The safest place imaginable, in

her opinion, was the sole of her left shoe, and she accordingly placed two \$50 bills inside her shoe.

There was a small man seated in the corner. His hat was pulled well over his eyes, and he constantly kept a small black valise in his lap. He took no part in the conversation, and it was not long until the passengers-who received rather curt responses of such questions as they addressed to him-began to regard his actions with suspicion.

The coach rolled on toward Deadwood. Next morning about 7 o'clock the expected robbers appeared. The messenger was slightly wounded, the horses were held, and both driver and messenger compelled to dismount and put up their hands. The passengers were ordered out of the coach, and it is needless to say they obeyed with alacrity. The three men who were to resist the robbers were so awed by the presence of several large revolvers thrust in their faces, that they gave up their treasures without a word.

Said one of the robbers: "It's agin' our rules to bother women; so, old girl, we won't search you."

While two of the desperadoes went through the pockets of the men, another happened to see the small man in the corner. "Hello!" said he, "here's one in the coach. come out of there."

The man appeared, but without the little black valise. He was very poorly dressed, thin, pale, and affected by a cough. Said he;

"Boys, I hain't got much, only a few dollars; and if you take what little I've got, I shall have no money to get my meals; and if you will let me alone I'll tell you where you can get \$100 more."

At this the poor woman turned pale, and some of the passengers began to mutter. "All right," said the spokesman of the bandits, "we'll search you, and if you ain't lying we'll let you go if you'll tell us where the \$100 is." So they searched him, and found only \$7 or \$8 in his pockets, which they let him keep. "Now," said the little man, "if you'll make that woman take off her left shoe you will find in it two \$50 bills."

They did so, took the money, and departed. The passengers resumed their seats in the stage, and the journey was continued, but scarcely had they started when a torrent of abuse was poured out upon the small man. "You villain," said one, "you ought to be hung."

"Yes, and I am one who will help do it," said another. "My money; oh, my money," wailed the woman. One of the men called to the driver to stop. The mean man in the corner was dragged out of the coach, and the excited passengers were about to string him up to the nearest tree. "One minute; just one minute," pleaded the little man. "it's only ten or twelve minutes to the next stage station, and it is customary in this country to give a man a little show for his life. I beg of you just go that far, and if I can't properly explain you can hang me."

The driver told the passengers that the men at the station would not interfere if the subject could not make a proper defense of his action, and as the fellow pleaded so hard, they reentered the coach and proceeded upon their journey again.

Little was said during the next hour and a half; the mean man was closely watched by the male passengers, and escape for him was impossible. As the buildings of the station came into view upon the coach suddenly swinging around a bend in the road, the small man brightened up considerably. "Now," said he, "I will tell you. We are perfectly safe here, as this end of the line is free from robbers. I have \$25,000 in my valise and the only way I could save it was by diverting the attention of the robbers to some one in the party. Unfortunately that one had to be the lady." He then returned the woman the amount taken from her, besides loaning the other passengers enough to meet their immediate expenses,

Geo. E. Bartlett.

Mr. Taylor's Pistol Score

November 17, 1898. An event of more than ordinary interest occurred last week at the range of the Philadelphia Rifle Association. Cecil Hamelin Taylor, of the Massachusetts Rifle Association and the Harvard Rifle and Pistol Club, made a perfect score of 100 out of a possible 100 in ten shots on the Standard American target at 50 yards, with a pistol. This is the first time a perfect score has been made with a pistol on this target under the recognized rules for outdoor shooting in America.

It is worthy of note that the Standard American target was adopted by riflemen in America in 1886, and from that time to the present it has been almost universally adopted for outdoor pistol and revolver shooting, the 200-yard rifle target being used at 50 yards for this style of shooting. Nearly all clubs make the conditions of matches to call for ten shots, so it can be safely said that for over twelve years the expert pistol shots of America have striven to make a perfect score. This was once accomplished with a revolver, but never before out of doors with a pistol. On July 5, 1889, E. J. Darlington, of Wilmington, Del., scored 99 out of 100 in ten shots at 50 yards, and on Dec. 31 of the same year Henry S. Harris, of the Massachusetts Rifle Association, secured the same total under similar conditions at Walnut Hill, Mass., and these scores have held the record until broken by Mr. Taylor on Nov. 2 by making the possible 100 points in ten shots.

It is gratifying to note that apparently all conditions required to give recognition to this score were complied with. The club where the shooting was done is irreproachable in its standing; the distance shot over exceeding that required; the shooting was on a regular club shooting day, and was duly witnessed by the secretary and other members of the club; the shooter declared his intentions of shooting for a record before beginning his score; an affidavit certifying to the correctness of the score was made, signed by Mr. Taylor, the secretary of the club, and sworn to before a public notary, and the original target, which contained no other shots, sent to this office. We can imagine nothing more thoroughly done than this great performance.

We may, perhaps, show unusual interest in this record. The reason for this is, it seems to be the culmination of a great many years of labor on our part. Something over a decade ago there was little or no pistol or revolver shooting out of doors on club ranges; the little done was indoors at short range. These arms, and the ammunition particularly, were far-from perfect, and no recognition was given to that department of sport by papers. *Shooting and Fishing* may modestly claim to have established this department of sport, brought about rules to govern it, influenced the perfection of arms and ammunition for the same, and consequently we feel gratified to see a fulfillment of our repeated prophecy, that American pistols, revolvers, and ammunition are capable of the finest work when in the hands of American marksmen.

This remarkable score was shot with a Stevens pistol, Conlin model, with the long-rifle cartridge of Union Metallic Cartridge Co. make.

Mr. Taylor, the marksman, is well known to readers of this journal. He is a superfine pistol shot, and were we asked before this performance to name the person likely to break the record, his name would have been among the first to occur to us.

Walnut Hill Gleaning

December 17, 1898. Saturday, was a record breaker, probably the best shooting day we have had this year. The wind, what little there was, was almost eliminated from the question, and, with the exception of an occasional breath, which might deflect the bullet two inches or less, the problem was simplified into two factors: holding, and the capabilities of the rifle and ammunition, the latter of which might be termed a compound factor. Under such conditions one would be very rash in denying that the rest shooters have a great advantage over the offhand men, as holding is also practically eliminated, with a crosspiece on the barrel and a wedge under the heel of the buttpiece, the gun is as solid as if shot from a machine rest, and if ammunition and barrel are perfect, should make 12's indefinitely, but it doesn't, wherefore Mr. Chase is receiving the sympathy of all good members.

Arriving at Walnut Hill early in the day, I remarked to J. E. Kelley that the day was ideal for rifle shooting. He answered that he was shaky, and couldn't hold; this with a very disgusted look. I was therefore prepared for what followed, as I have learned by experience that when Kelly can't hold he usually pushes pretty close to the record before the day closes.

Kelley, Eastman, Coombs, and several others shot the greater part of the day on the Standard target, the former having a clean score of 91 and several minor ones. Toward the middle of the afternoon he concluded to shoot a few scores on the ring target and shifting to that target, fired just thirty shots, counting 228, 231, 227 = 686 points, an average of 22.86 per shot.

This shooting was done with a .38-55 Winchester rifle, No. 4 barrel, set trigger; charge, 4 grains Schultz, 45 grains Hazard FG, 300-grain Ideal .38-55 M bullet, cast, I believe, 1 to 30 or 32, and lubricated with banana lubricant, which Kelley swears by and allows to be by far the finest lubricant he ever saw or heard of. It is the opinion of the writer that these fine cannelured bullets are greatly improved by running a drill of the proper size into the base of the mold, so that the last groove is removed, making the last band three times the width of the rest. The fine cannelures at the point allow the bullet to seat easily in the barrel when loaded with four or five bands projecting from the shell, and the wide band protects the base from being defaced, and also from gas cutting. After the big snowstorm of Jan. 3 last a number of bullets were picked up at the butts in almost perfect condition, among them being several of the above style. With one exception the bases were more or less badly defaced, the last band being partly torn off or bent back; in one case two bands were injured, being sliced diagonally off, and the lead having a crystallized appearance. As the points were uninjured, it is plain that the bullet left the barrel in this shape, and nobody would expect good shooting from such a bullet. The recording angel may have an entry against that bullet.

Several rest bullets were among the number, the lap of the Chase patch showing plainly down the side, and also on the base where it was turned over. Singularly, on fitting it to the muzzle of the rifle, little or no upset was found, the bullet entering the barrel with perfect freedom.

To resume: Shortly after dinner a great commotion was observed near the rest target, and upon inquiring the cause it was learned that Mrs. Briggs had completed a score of 119, again raising her record. Congratulations were offered and graciously received, and the fine score was backed up by another of 116 which followed.

Mr. Chase arrived on the 2 o'clock train, and, getting out his traps, started a score with two 11's; then followed them by sixteen consecutive 12's. It was noted that a perfect score would result, and an expression of disappointment might have been observed on every face when the dial showed a 10 on the nineteenth shot. "What!" exclaimed the disappointed shooter.

"A 10 at 8 o'clock," repeated the scorer, and Mr. Chase proceeded with his loading as if nothing had happened. It was an unaccountable shot, and spoiled one of the best runs ever made at Walnut

It has often been said among the M. R. A. that a class match always develops a prodigy in some weapon, and the present series of matches is no exception. Early in the present year a new member was admitted to the folds of the M. R. A. in the person of H. Hutchinson. He was first noticed shooting a pistol, and later a Colt's military revolver, both with fair success. Later he developed a taste for rifle shooting, using a .32-40 rifle and counting himself in great luck if 70 was raised. That limit has been considerably improved upon very suddenly of late, five scores of 80 or better being added to his credit on Dec. 10, including two 85's. That an improvement should take place was almost inevitable in one shooting as regularly as he does, but the prime factor is the one which has raised the averages of so many of the members during the past year or so; namely, the .38-55 Winchester schuetzen rifle. As a member owning one remarked on the train coming in, "Why, the gun almost shoots alone."

Said Eastman, who introduced the rifle at Walnut Hill, looking around at the various owners, "I suppose you fellows will be taking me into town and giving me a big supper some time."

In answer to the inquiry of W. L. C. regarding parts of Maynard rifles, the same may be obtained by writing to Geo. W. Hadley, Chicopee Falls, Mass. of the Lamb Knitting Machine Co., which is the old Massachusetts Arms Co. under another name, and has the stock of the same.

O. M. Jewell has been a frequent visitor of late, with his .22 caliber long-rifle Maynard. He likes to shoot the little gun, and a score of 84 ended with a 5 shows what it can do on a good day. The was a poor hold. Only three more shoots for the year.

Chelsea, Mass. W. F. Spencer.



Winchester Schuetzen Rifle

Greenwoods Gleaning

July 7, 1897. There was recently brought to my attention an interesting illustration of the variation in factory made cartridges, showing the irregularity which may occur from a difference in loading. Some months ago a lot of .25 rim-fire Stevens special cartridges were ordered, which showed great accuracy in shooting. A few months later another lot was procured, which shot accurately, but with such a difference in elevation that the discrepancy prompted an investigation, with an accurately sighted Stevens rifle, the first lot of ammunition would, when shot from a rest, place its shots in a small group in the seven and eight circles of the Standard American target, at 12 o'clock. With the second lot of cartridges, fired under the same conditions, with the same rifle, the shots would group accurately in the three and four circle at 6 o'clock. The cartridges were dissected; it was found that those of the first lot contained 10 1/2 grains of fine powder, while those of the second lot were charged with 9 1/2 grains of coarser powder.

The accuracy of the latter was, it is thought, equal to the former; but there was the difference mentioned in the elevation by the variation of the charges. As a change of ammunition occurred when shooting a match, it made a lasting impression on those who pursued the investigation.

The columns of *Shooting and Fishing* and its predecessor, *The Rifle*, will bear evidence of the amount I have written in relation to pistol and revolver shooting. I have seen these sports spring from insignificance into prominence, and have had the pleasure of recording performances of the best and most widely known experts in America with these arms. It is often the case that skill is developed to such an extent in an individual in a particular section as to give his friends an idea he is invincible; but that same person, when measuring skill with an expert in another section of the country or in another country, may prove to be far below the best shots in the world. If a man can reach the top round of the ladder in marksmanship at home, then go abroad and take rank among the best shots in Europe, he may safely be called an expert in every sense of the word.

Two or three years ago my attention was attracted to unusually meritorious work in pistol and revolver shooting by Mr. F. B. Crowninshield, of Boston. This gentleman first claimed my attention by his revolver shooting in the gallery of the Boston Athletic Club. When I saw his skill, I remarked to a coterie of pistol shots that there was a man who would soon take rank among the leading shots of the country, and I prophesied the most brilliant future for him in his shooting career. Soon after Mr. Crowninshield's excellent work at the Athletic Club, he was tempted to Walnut Hill to the range of the Massachusetts Rifle Association, where he recorded many brilliant scores. About this time he engaged in business which prevented his attending regularly to practice at Walnut Hill; but even under this disadvantage he made many high scores, and several times won the championship medal in contest with the leading pistol shots of the country.

Recently Mr. Crowninshield made a short trip to Europe, and naturally, as soon as he reached Paris, he sought the famous pistol gallery of Gastinne-Renette, and there left a record of which any devotee to shooting might well be proud. He has just returned to America, and I learn that, although he was only in Paris about a week, he was a frequent visitor to the above named gallery, where the most famous shots of Europe congregate. Mr. Crowninshield succeeded in winning the full set of medals offered at this gallery, there being three of silver and one of gold. These were all won with a .44 caliber American revolver, which he carried with him. The silver medals are won by breaking a number of plaster images and eggs in succession. The requirements for winning these medals are insignificant as compared with those necessary to secure the gold medal. It requires for the latter 12 consecutive shots, all within the second circle or a carton of a bull's-eye, which is about 1 1/4 inch in diameter, while the carton is about inch in diameter, the distance at which the shooting is done being

16 meters. The very small size of the black bull's-eye at this distance makes it an extremely trouble-some object at which to shoot. It is hardly larger than the head of the front sight on the revolver, and I learn from Mr. Crowninshield that it is quite trying on one's eyes, after a few scores have been shot.

The targets were all placed in the open air, and the frequent changes in the light proved very annoying, as such changes considerably affected the elevation. This was enhanced by the fact that the weather was very unsettled during Mr. Crowninshield's stay in Paris, it being cloudy one minute and bright the next, with frequent showers. In addition to this, and what seemed to this gentleman to be the greatest handicap of all, is that the targets are backed up with a black background, so whenever one missed the bullseye, he would see another black object close to the black center he was shooting at, and not so very much smaller either; therefore, if one shoots half a dozen shots all close together, and just outside of the bullseye, then the center of the black which you see is not the center of the target which you wish to hit, and it is extremely difficult to make the proper allowance to hit the center. The larger the caliber of the pistol or revolver, the greater the handicap.

(see back cover for target.)

I have heard considerable of a new powder, which Gastinne-Renette is now using in his gallery. It is a nitro compound, and Mr. Crowninshield informs me that it is so much superior to the black powder used in this country that it more than makes up for the above named disadvantages. The charge is not more than half as large in amount or in weight to that of similar cartridges used for shooting in this country. Mr. Crowninshield carried 300 specially loaded cartridges with him to shoot in Paris, but he found those loaded by Monsieur Gastinne-Renette much better. The French cartridges would shoot fully an inch higher than those with black powder loaded in this country; the report of the former was not half so loud as the latter, and as to smoke, the French cartridges showed practically none.

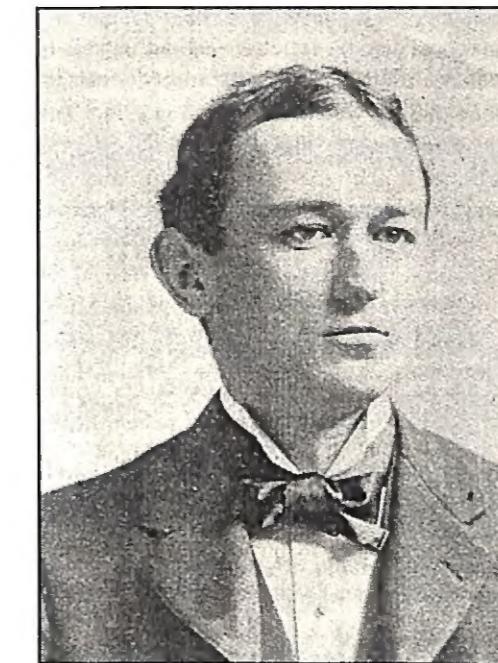
I was especially anxious to learn of the nonfouling properties of these cartridges, as it is a crucial test when shot in revolvers. Mr. Crowninshield informs me that a dozen of the French cartridges would not dirty the inside of a revolver barrel nearly so much as one of the American cartridges. The bullets used in Gastinne-Renette's gallery are round, similar to ours, but they use no lubricant at all, not considering it necessary; and after shooting something like a thousand shots from an American revolver, there were no signs of injury to the barrel in any way.

I shall take pleasure in presenting later to the readers of *Shooting and Fishing* an exact copy of the target made by Mr. Crowninshield in his score winning the gold medal, this target being full size, and the correctness of which is properly certified to by Monsieur Gastinne-Renette, with the following inscription

"Douze balles tirees au revolver .44 a 16 meters medaille d'or gagnee par Monsieur F. B. Crowninshield le 8 Juin 1894. Gastinne-Renette"

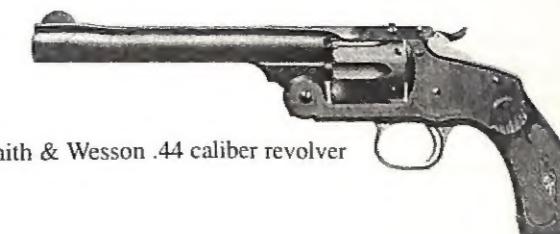
Although the powder used in this famous gallery is of foreign manufacture, as are the bullets, the shells are the products of the Union Metallic Cartridge Co., of Bridgeport, Conn. Mr. Crowninshield brought home with him a small flask of powder, which is small in grain, yellow in color, and gritty in feeling. In smell it is much like collodion. He also brought with him a box of their loaded cartridges. Of Monsieur Gastinne-Renette Mr. Crowninshield speaks in the highest terms, also of the attendants in the gallery. They were extremely polite to him, and of their conduct Mr. Crowninshield says, he never met anywhere gentlemen who were more competent, polite, and obliging. Indeed, it would be very pleasant if some of the men we meet here at home should go

over there and copy some of their manners, if not their shooting ability. Mr. Crowninshield was unable to meet any of the English pistol shots, much to his regret. His stay in London was brief, remaining there but three days, and he tells me he was unable to find any good gallery there. His success in France I consider deserving the highest commendation, and from what I have seen of his work, I feel certain that Mr. Crowninshield can duplicate the work of the best professional shots in particular styles of revolver shooting. Mr. F. B. Crowninshield.



Mr. F. B. Crowninshield

Amateur Pistol and Revolver Shot.



Smith & Wesson .44 caliber revolver

Walnut Hill Gleaning

July 19, 1898. Everything continues quiet at Walnut Hill, for several reasons. Gleason and Humphrey are off yachting all summer; Chase hunteth the festive woodchuck; Eastman is fishing; Keough is enjoying the climate of Cuba, and the militia generally is conspicuous by its absence from the range.

Some time ago I spoke of the interest exhibited by the public in gunstores since the present war was declared. For some two months past there has been an exhibition in the window of Win. Read & Sons one-half of a large modern shell, split lengthwise. In the large number of times I have passed that store I have never been able to get close enough to examine the same, on account of the crowd which looks to have been there ever since it was placed in the window.

The gunstore formerly conducted by John Woods, Jr., at 74 Washington street, Boston, was recently the scene of an accidental shooting affair, resulting in the death of one young man and the wounding of another. The stock was purchased some time ago by the Lovell Arms Co., and has since then been crowded day and night by bargain hunters, anxious to get something for nothing. On this day a clerk was explaining to a customer the process of loading a revolver just sold, and, instead of using a blank or empty shell, inserted a ball cartridge, which was discharged, the ball traveling the length of the store, wounding another customer in the nose and upper lip, and finally lodging in Carl Herson, a young man from Chelsea. An ambulance was called, but he died on the way to the hospital.

It would seem that some persons never take warning from previous accidents, this being the most serious of several similar accidents which have come to the notice of the writer within a few years. One in particular was caused by a person delivering to a clerk, also in Lovell's, a loaded doubleaction revolver to be repaired. The clerk, without looking at the arm, proceeded to snap it, when it was at once discharged, the bullet lodging in the back of a fellow clerk. The necessity of carefully examining a fire arm of any description before snapping it cannot be too strongly emphasized. In nearly all similar accidents it will be found that the prime factor is inexperience in handling fire arms.

The longer a man has handled a gun the more afraid he is of it, and the great care taken by members of the Massachusetts Rifle Association to avoid accidents has been mentally commented upon by the writer hundreds of times. Any fire arm especially a revolver, on account of its size-is a dangerous article, and the experienced shot will invariably, when handed one for inspection, open the breech and glance into the chamber before trying the trigger-pull.

J. E. Kelley is receiving congratulations for his good work at the *bundesfest*. As is characteristic of him, he says little, but is evidently doing a lot of thinking.

F. O. Young, J. E. Gorman, and E. D. Payne were with us July 16, and I did not hear any questions as to the whereabouts of the bad winds of Walnut Hill. We had them on hand, and the man who did not watch the flags got left. Young and Payne were both much surprised at getting out of the black at times on good holds. Nothing unusual here though. On June 18, while shooting my prize pistol scores in the match which closed on that day, I got as low as 6 with a 10 hold at 50 yards. The wind on that day cost me a ten dollar bill, for I was in good shape, and, when the wind held up a little, made 90's and better.

The results of the *Bundesfest* have not injured the Winchester rifle in the estimation of the M. R. A., and the .38-55 is the favorite caliber, especially for our range. Of course men are constituted differently, and some might not be able to stand the recoil. Personally, I shoot a .32 caliber because I happen to own it, but have quite recently fired ninety shots in an afternoon from a .38-55-320 Ballard and never felt the recoil unpleasantly, although used to shooting a much lighter load.

W. F. Spencer Boston, Mass.

Press dispatches of yesterday conveyed the information that up to July 19, 10,000 Spanish Mauser rifles and 10,000,000 cartridges had been turned over to Gen. W. R. Shafter at Santiago de Cuba. The rifles, it is understood, are to be used by our volunteers in place of the .45 caliber Springfield rifles with which they are now armed. These Mauser rifles are not believed to be in first-class condition, however, as the average Spanish soldier dislikes to clean his rifle only second to his aversion to using soap on his person. The sights are reported to be in miserable condition, and it is generally believed many of them were never used at all. To bear out this belief we have the testimony of some of our officers, who have said the Spanish soldiers seldom aim their rifles, but shoot from the hip or from the shoulder as one does with a shotgun. Their failure to hit objects aimed at seems to bear out this statement. As nearly 23,000 soldiers have surrendered, it seems strange that less than half that number of rifles have been turned over to Gen. Shafter.



Spanish Mauser 7 M/M

Walnut Hill Gleaning

April 23, 1898. My prediction as to the probable adding of Pratt to the ranks of the experts was well timed, as the scores of April 23 plainly show. It may safely be said he has arrived. Any fair shot may scratch in a score of 86 or better occasionally, but it requires a good man to keep it up for five scores. Pratt shoots a Winchester .38-55 barrel in a Ballard frame. The weight is about twelve pounds. Set triggers were applied by Kirkwood, and it is shot dirty, with a priming of DuPont's nitro powder.

J. E. Kelley proposes sending his Winchester .38-55 back to the factory, to be fitted with set triggers, which he expects will help him by a few points on the German target.

It is curious to note the effect of age on the long-rifle cartridge. Anderton, in trying for a fifty-shot pistol record, used an old lot which he had carried to Florida and back. The first four scores were shot with these, and numerous hang fires and off shots complained of. The writer was fortunate enough to get hold of a fresh lot, just arrived from the U. M. C. Co.'s factory, which shot beautifully, and proposed that the last score be shot with them, which was agreed to, and resulted in a 97. The final 8 in the third score (96) was caused by a hang fire, as Tom said he had a perfect hold. As before stated, Anderton is a trained athlete, and is a very muscular man, capable of enduring much. An electrician was at work on the bells, and had a quantity of solid rubber tape, very sticky, which he gave to Anderton. This was wound round the butt of the pistol, and firmly grasped by the right hand, which it never left until the fiftieth shot was fired, the loading being done with the left hand. As he is naturally left handed, this did not bother him at all.

He shoots a Smith & Wesson, 10-inch barrel, to which he has fitted a very high and fine bead front sight. The 11-inch black with white center is always used by him, and he holds directly on the white center.

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In answer to the query of G. J. Parker in regard to the score of 92 made by J. H. Keough with a Springfield rifle, I would say the match was, as he states, a military match, calling for fifty scores, Creedmoor count, but the score boy was instructed to keep the Standard American count, as it was shot on that target. If the record is to be thrown out on that ground, it would seem that all Standard American target records with military rifle should follow suit, for it is a side record anyhow; simply showing how well the shooter held to make a 49 by Creedmoor count.

Many thanks to B. B. for his kindness in taking up the cudgel in my behalf. Regarding my Maynard an explanation is due. It is the fourth of that make which has been in my possession. The first I had when about fifteen years of age, and my first successful wing shot, at a Wilson's snipe, was made with a .50 caliber shot barrel which accompanied it, on a day when my father and a friend drove eighteen miles and got just one between them. Mine was shot almost within sight of home. The second had two rifle barrels, .40-40 and .35-30, both of which shot well, but the rifle was, like the former, a 73 model, and was disposed of. Then came several rifles of different makes, but I still hankered for the old Maynard, and while on a trip to Florida in 1891 a third was ordered, a .40-60 with a 30-inch barrel.

This was for a hunting rifle, and I still have it. Several barrels were added to it .22 short, .22-10-45, .25-20-77, and .32-35, 165-and all gave good satisfaction. In an evil moment I had the .22-10-45 chambered for the Hornet cartridge, and have never ceased to regret it, as I never have had any decent shooting from it since.

In the fall of 95 I had a. beautiful No. 16 .32-35 Maynard offered to me at a very reasonable price. This was made to order just before the company ceased making rifles, and had hardly been fired when I got it a series of matches was in progress at that time, and my other rifle being a plain hunting model, I bought this one and shot it during the match. This is the one seen by B. B., and which I use for target work. As regards barrels, I am almost as badly off as B. B.'s friend, but I do not mix them, I shoot the .32-35 in matches, realizing the fact that it is handicapped in competition with a .35 or .38 caliber. The same caliber, but a different barrel fitted with a Mogg telescope, is used for woodchucks with great success. The .25-20-77 I use for squirrel shooting, and no other caliber will take its place in my heart for this work. The .22's I use on cats, usually the Hornet, with or grains of nitro and a 45-grain bullet, I do not think it will reach the scrap heap soon, and H. M. Pope, after examining it carefully, admitted it was too good for that.

Busfield's barrel was restored by being shortened and having the false muzzle refitted by Mr. Pope. Busfield visited the range a short while ago and had the bulged piece with him. It was curious to see the effect of the confined air on the barrel. The inside, for about an inch from the base of the forward bullet, looked like a piece of rough cast iron, was bulged all round, and had a split on the left hand side through the heavy barrel.

Mr. Pope says a single bullet, if left at the muzzle, will be ejected without damage to the rifle; but if at a point 12 inches from the breech, the barrel will be ringed, the theory being that the unburned powder being driven forward in a compact mass by the explosion of the rear portion, acts as a second bullet would, but that the charge, being wholly burned before the muzzle is reached,

reached, does no damage. He related to the writer a curious experiment on the windage of two Pope rifles of .28 and .33 caliber. Two machine rests were arranged, a rifle adjusted on each, and standing between the two they were discharged simultaneously with either hand, each pair of shots being thus fired under precisely similar conditions. Singular to relate, it was found that the effect of the wind was less noticeable on every shot from the .28 than the larger bore.

We are likely to be deprived of the company of several members in the near future. Anderton, Coombs, and Keough are members of the Massachusetts Volunteer Militia, and may have a use for the skill they have acquired at Walnut Hill. They may be depended on to give a good account of themselves if placed within rifle range of a hostile force. Anderton is no novice at the business, for he was in the British army during the Sepoy rebellion in India.

The alterations at the pistol end of our range have been completed, and a great improvement is manifest. Another innovation has made its appearance at Walnut Hill; viz, the pinhead sight. Kelly and Eastman have each used one for some time past.

Boston F. Williams.



The First Lesson

A Visit to Walnut Hill

July 23, 1898. During the three years I have been interested in rifle shooting I have realized that it was a science, but it had not fully dawned upon me that it was such an exact science as it is until July 16. Being on that day one of a party of three members of the Derryfield Gun Club to visit the range of the Massachusetts Rifle Association at Walnut Hill, the precision and delicacy of the sport, and its appurtenances, were there fully demonstrated.

The first member of the association whose acquaintance I had the pleasure of making was T. E. Russell, a gentleman who makes handsome bullets for others, and can place them himself, at rest, with few exceptions in the 12-ring of the Standard target, at 200 yards, with his telescopic-sighted rifle. His rifle is .38 caliber, Winchester barrel, and Ballard action. His telescope is about 16 power, with sliding mount. His bullets are his own make, Rabbeth design, shot with Chase patch; powder, Hazard FG, an ordinary 55-grain shell full. He showed me a card of recent date, containing ten 12's and two 11's. Mr. Russell has never made a perfect score, but has often come dangerously near it. If there are any aids toward accuracy for the rest shooter which he does not possess, I feel certain he is ignorant of them. His equipment is one of the finest of the many good ones I saw at the range, and he convinced me that he is master of the art of handling it for best results. Mr. Russell neglected his sport to allow one of our party to try a few shots with his rifle, and to acquaint us with the arrangement of the association's well adapted two-story house and its many conveniences. The lower floor is entirely for rifle and pistol shooting, and the upper for safely and handily storing rifles, ammunition, etc. It also contains a large dining hall.

Another rifleman whose fine offhand scores I have long watched in this journal, often finding them at the top of an excellent list, whose acquaintance I was pleased to make, was C. A. Coombs. That he is a natural marksman and shoots because he takes pleasure in it was evident to me in a very short time. Mr. Coombs also impressed one of our party to shoot a score with his rifle. It was my good fortune to meet my Maynard friend of *Shooting and Fishing* acquaintance, who shoots as F. Williams, and whose rifle, he says, has thus far escaped the scrap heap. His Maynard, with the .32-40 barrel he was using that day, is a good-looking and undoubtedly well made arm, it is light in weight, though perhaps suited to Mr. Williams in that respect, as he is not a large man, but its breakdown action condemns it, and that fault, if nothing else, will drive from use the few of its kind not already discarded. Mr. Williams showed me a 90 offhand card made a few weeks before with his favorite rifle. That is superb work, but I think if he had a Pope barrel of .25 or .32 caliber, fitted to a Ballard or Winchester action, and the equipments belonging to it, he would do even better, with less work. I should question his way of holding being strictly offhand, as usually understood, though necessary in his case because of an unfortunate difficulty with his right eye. He stood with left side to the target, butt of gun inside of coat and coat buttoned, stock across chest, left elbow on hip, left hand clasping and supporting right hand under trigger guard, and sighted with left eye a position that would suggest rubber to a gamin. Mr. Williams is agreeable, young, energetic, an extra good rifleman, and should use a modern rig. *Shooting and Fishing's* interesting and talented correspondent, Fred O. Young, of San Francisco, was with the Walnut Hill men a part of the after-noon, using his Pope rifle and a pistol. Mr. Young attended Gaskell's business college in this city in 1874, coming from Lincolnville, Maine. Prof. Gaskell considered him the champion left-handed ornamental penman of America at that time, and he has always remained an expert with the pen, as well as with firearms.

One thing that struck me as odd at Walnut Hill was the large proportion of target rifles of .38 caliber, and the very few that were used in the same shape in which they came from the factory.

The work of the Winchester Co. was represented in some part of the party was present as entire strangers, only to see and learn from the shooters at one of the leading ranges in the country. We were pleasantly received by everyone, and in five minutes felt entirely at home, and all wished we had taken our rifles along. High as my short experience with riflemen had placed my social estimate of them, the visit to Walnut Hill of my companions and myself, and the kind attention and courtesies we received there, raised it to my highest ideal of unselfish and fraternal companionship.

Payson Manchester, N. H.

Walnut Hill Gleaning

July 30, 1898. Eastman has returned from his trip to the northern boundary of Maine, as will be noticed by the scores of July 30 in last week's *Shooting and Fishing*. He reports a great deal of illegal shooting of deer and caribou. On one occasion (the locality escaped me) a game warden was informed by him of the fact, but pooh-poohed the idea, and, when invited to stay over a day or so to verify the statement, refused, saying he must leave at once. The next morning Eastman saw a canoe load of venison paddled down the river and a wagon containing three hind quarters was also seen, from which it was openly sold. Very effective game protection, certainly.

J. E. Kelly is now added to the long list of missing from Walnut Hill. He is taking a well deserved vacation, and it is hoped he will be again in the ranks of the faithful on the 13th. Walnut Hill received a visit on Aug. 6 from a wellknown contributor to the columns of *Shooting and Fishing* Miss Cornelia T. Crosby. Miss Crosby's account of her visit will, in all probability, be read over the nom de plume of Fly Rod, as a note-book was much in evidence.

I was pleased to read of the visit of Payson to Walnut Hill, and regret that he did not reveal his identity. I have since been greatly disturbed over his description of my position in shooting. What a horrible sight I must present. If it were possible for me to adopt the position he describes I would make a first-class contortionist for a dime museum, but friend Payson's eyes have deceived him as badly in this case as they have regarding the good qualities of the Maynard rifle, which has become a back number in his mind, simply because it is no longer manufactured. The Ballard rifle could, on this basis, also be classed as a back number.

No. Payson, I thank you for the compliment, but I am not an extra good shot. In fact I shoot in the second-class matches and I don't know of anything which will improve my scores but a larger caliber than .32-35 and more practice. A .32 caliber is too light for every-day work on our range, as I have frequently stated, and visiting riflemen will bear me out in this the Standard target, which stood for so many years, was made with a Maynard rifle, and that the maker has several 95's to go with it, one of which was made at Walnut Hill. When I invest in a new rifle it will be a Winchester Schuetzen, and of .38-55 caliber. Payson will have a hard job convincing the members of the M. R. A. that when a rifle may be purchased for \$15 list, which is capable of making 120 on the rest target, it is better to pay \$60 for one which will do no better, nor as well.

The position I adopt in shooting may be more briefly explained by stating that I shoot from the left shoulder, with a breast, not hip-rest, and support the rifle on the finger and thumb tips of the right hand, similar to that adopted by F. O. Young, whom he saw on the same day, except that Young uses a palm-rest.

Mr. Young exhibited upon that day an ideal flask, with an attachment of his own for the purpose of loading with nitro priming. The idea is a good one, and serves perfectly for a flask to be

carried back and forth. For exclusive range use, however, the No. 2 powder measure is better, as it can be operated more quickly.

The gunstock referred to recently by Mr. Pentz as being made for Mr. Sauter abroad is not a novelty by any means, as the writer remembers one with a similar castoff used on the grounds of the Suffolk Sportsmen's Club, of Chelsea, Mass., at least sixteen years ago, made, if memory serves correctly, by W. R. Schaefer & Sons.

Referring to the comparison of the Mauser and Springfield rifles, as noted in last week's issue, the writer has observed quite a number of these instructive (?) articles in the daily press, one of which even stated that a bullet from the Springfield was not deadly at 300 yards, while the Mauser was described as being absolutely so at a range of over a mile.

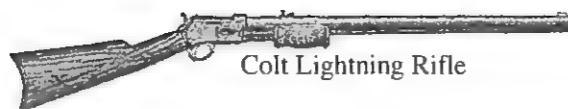
Dr. Louis Bell has been hard at work for the past month perfecting a reduced charge for his .30-30 Winchester rifle. After many failures, charges were secured which gave fine results at 50 yards. The latest combination was the light Savage bullet and No. 1 Dupont nitro powder.

W. F. Spencer Boston, Mass.

Another Perfect Rest Score

September 8, 1898. Again a perfect score of ten shots at 200 yards on the Standard American rest target has been made. It was shot at Walnut Hill, Mass., on Saturday last by H. L. Willard, a marksman of the highest skill, who has twice before made a perfect score, and, so far as known, is the only man who has accomplished this feat. A perfect score on the above named target means placing ten consecutive shots on the inner carton of the bull's-eye, which is 1.41 inches in diameter. We understand that each time this remarkable feat was performed it was done with a different barrel of the Winchester company make.

It is said that the daily product of Krag-Jorgensen rifles at the United States armory at Springfield, Mass., is about 300. The Mauser rifles captured from the Spaniards will soon arrive at the armory, and some of them will probably be altered to take the United States .30 caliber cartridge. This will enable experts to judge the comparative merits of the Krag-Jorgensen and the Mauser rifle shooting the same ammunition.



Colt Lightning Rifle

A Good New Cartridge

April 6, 1893. We are in receipt of samples of the new .32 Ideal shells and bullets just produced by the Union Metallic Cartridge Co. Before us is one of them, cut open, showing section of head and pocket, which looks as near perfection as can be. We should say that, from appearances, it was properly named. The length is 1 3/4 inches; shape, straight inside and outside; head perfectly solid, with a strong pocket. It looks as if they would be as serviceable as the Everlasting shell as there is a good thickness of metal at the muzzle. The body being straight, without taper or bottle neck, it will undoubtedly become a favorite with those who desire to load with various charges of powders and weights of bullets for short range, small game and target work. The shell as loaded at the factory will contain twenty-five grains of powder, and the bullet will weigh 125 grains. It has three grooves, which are seated in shell deep enough to cover them all. Bullets are held friction tight, with no crimp on shell. The bullet shown in cut is from the Ideal Perfection mold. The 75, 100, 125 (which is the standard), 150 and 175 grains may be used as desired with lesser or greater charge of powder, bullets seated within shell any depth without wadding. When shell is full it will hold thirty grains powder. We learn also that the J. Stevens Arms and Tool Co. is now ready to make its new Ideal rifle for this ammunition. Those getting this outfit will certainly have an "ideal" one in name, and we doubt not in reality. Old .32 short, long and extra long rim-fire and centralfire rifles (also .32-20) may be rebored for the .32 Ideal ammunition, price of which is as follows: Cartridges (.32-25-125), \$20 per 1,000; primed shells, \$10 per 1,000; bullets, 125 grains (diameter .323) \$5 per 1,000.



75 grs
100
125
150
175
200
225



Stevens Target Rifle
25/20 caliber

Constructing A Rifle Range

Systems for Marking shots. Although the iron target is rapidly falling into disuse, especially at short range, 200 yards, the Creedmoor count is still used, though chiefly by military marksmen. There are two modes of marking shots by Creedmoor count, in general use. The first is by the disks, placing one where the shot strikes the target and signalling the value at the same time; the white disk indicating a bullseye, counting 5, the red a centre, counting 4, the black and white an inner, counting 3, the black an outer, counting 2. The marking disks are arranged in the pit as shown in the illustration. If an iron target is used, a brush on the inner side of the disk paints out the shot at the time of signalling the value. If paper targets are used, and the disks employed, the proper one is placed upon the location of the shot, after which it is replaced in its rack, the target lowered, the shot pasted, a white one being used for shots outside the bull's-eye a black one when in it. Well grounded objections have been raised to marking by disks. The color is sometimes mistaken; if used to paint out the shot on an iron target it is necessary to be supplied with paint in the pit, which causes much dirt, and the brushes are stiffened and made unserviceable. The disks occupy space in the pit, and are unnecessary if the better mode of clocking the shots is employed.

A device for registering the value of shots, which has given satisfaction at Walnut Hill, and is in use at many of the leading rifle ranges in America, was perfected by Mr. J. W. Soule, a practical rifleman and mechanic, possessing a very high order of skill. His device is designed to accurately indicate on a dial the value of shots at rifle ranges, and its mechanism is as follows:

A brass plate, supporting two bearings, at right angles with each other (one horizontal for the hand spindle, the other vertical for the shaft), is fastened to the back side of the dial, the hand spindle bearing projecting through the dial. The index hand and shaft are connected by brass cut bevel gears. The shaft extends from the dial into the pit, and is there connected with a segment, having numbers on its arc corresponding to the numbers on the target. The segment is provided with a series of holes to correspond with its numbers. The shaft has firmly attached to it, by a set screw, a spring lever, extending over the segment, said lever having a projecting pin on its under side, which fits into the holes in the segment. In operation, the marker notes the value of the shot on the target, and covers the corresponding number on the segment with the lever (which locks in that position), and the hand is moved to a like number on the dial. This can be seen in the accompanying illustration. (see page 29.)

By using this device the value of a shot remains in view until the next one is marked, which is quite an advantage. The target index here shown, is very popular with American riflemen, because it can be used to mark shots by Creedmoor count, by Standard American target count, either on the off-hand or rest target, by Massachusetts target, or, in fact, any target counting from one to twelve.

The somewhat primitive method of showing a card with a large figure thereon is employed by some clubs, as well as a post with figures arranged, and a pointing indicator set opposite the figure representing the value of a shot. But no system has given such general satisfaction as the clock or dial indicator. Riflemen who shoot at targets and are scored the results, desire to know the location of their shots which are pointed out by the disk system but quite unsatisfactorily, and is only proper for military, or, what might be termed, coarse shooting. in connection with the target index is a plan which, wherever tried, seemingly gives satisfaction. It was originated at Walnut Hill by Mr. Geo. R. Russell.

After a shot has been fired, the target is drawn down into a pit by the marker, who is supplied with an indicator plug, which is shown in the accompanying engraving.

Fig. 1 represents a wooden plug. Fig. 2 represents an indicator; both are shown full size. This indicator is composed of cardboard; it has a black centre and a white outer. Through the centre of the

indicator is a hole through which the right-hand end of the plug is inserted from the reverse or white side and carried to the groove, shown in the engraving, where it is held firmly. The left-hand end of the plug is placed in the bullet-hole, and the target raised out of the pit for the second shot. By aid of the telescope at the firing-point, the riflemen who has fired his shot can distinctly see where his bullet struck. If inside of the bull's-eye the white outer makes it seen, and the exact location spotted; if outside of the bull's-eye the black centre makes it conspicuous and easily discerned. After the second shot is fired the target is again lowered by the marker, who hears the spat of the bullet as it strikes the target. The indicator is removed from the first bullet hole and placed in the second; the marker pastes a gummed paster over the first shot hole, if outside of the bull's-eye one of white, if inside of the black, one of that color. If the bullet cuts the edge of the bull's-eye a black paster is used up to the edge, and a white one for outside of the black. The target is then raised for another shot. At the side of the target, over the pit, is the clock dial previously described, the hand of which is set to the figures representing the value of the shot, by the marker from the pit; this being readily seen with the naked eye by the rifleman and scorer at the firing-point. (see page 29.)

With the pits properly constructed and the targets in good working order, attention can be given to arranging the firing points, if the plan of having but one line of firing points for the various ranges is adopted, a shooting pavilion can be arranged either extending down the entire line or part way. if the firing points are at different parts of the range, it is common to locate the shooting house near the 200 yard range. At Walnut Hill one steps from the club house to this firing point and this plan prevails at the ranges of a majority of American rifle clubs. It is desirable to have a solid and substantial footing while aiming, preferably the ground. Many clubs permit the use of wind screens and cover the firing points by projecting eaves to keep off the rain. Early in the history of rifle clubs many protested against these provisions for protection in inclement weather, but it was found that riflemen would not shoot except in favorable weather, without the screens and other appliances, and one club after another added them until the custom has become almost universal, it is usual to have each target numbered or lettered and corresponding figures at the firing points, to aid riflemen in shooting at the right targets; a fine is usually imposed for shooting on the wrong one. There should always be a flag of some striking color provided for the markers at the pit and one for each firing point. Should a target get out of running order or anything occur to call the markers from the pit to the front of the target, the flag at the pit should be planted at the end of the butt, targets should be lowered if possible, and the scores at the firing points should respond by planting flags in front of the firing points; all firing should cease, rifles uncocked and actions opened.

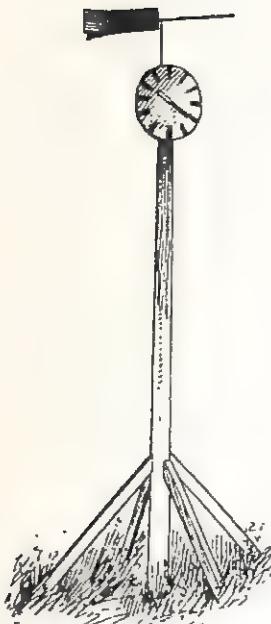
After repairing targets the marker should return to the pit and lower his flag, when all of the flags at the firing points from which shooting is being done should be removed. It is best to keep flags flying from such firing points as are not in use on shooting days, and only removed them when the targets are opened.

It is customary to locate at different places on the range flags, or streamers and a wind dial. Both are intended to indicate the direction and force of the wind.

These flags and streamers are made of any suitable material. The wind dial is illustrated. It is so arranged that the wind will indicate on a clock dial the direction from which it blows, and riflemen speak of a wind which blows the indicator opposite the figure three as a three o'clock wind; when pointing to the figure six, as a six o'clock wind.

It is sometimes difficult to provide a backing or rear embankment sufficiently large to catch stray bullets which come from wild shooting, and if a range is situated in a thickly settled country

it is necessary to provide a safeguard. This is done by erecting a barrier about twenty yards from the firing point, with holes cut in it, through which the Rifleman shoots. The barrier may be built of ordinary wood planks



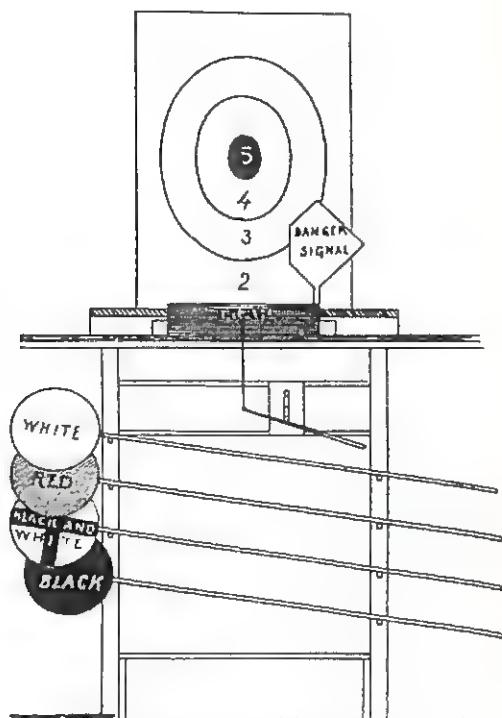
Wind Dial



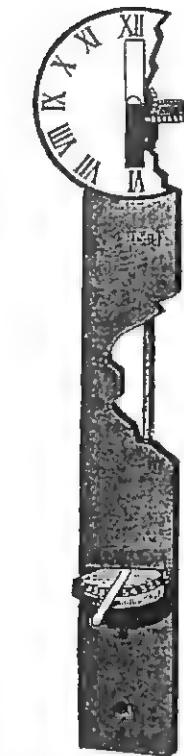
White Paster Full Size



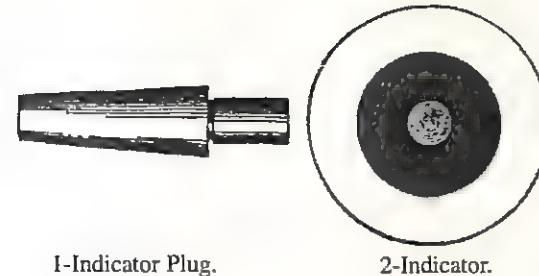
Black Paster Full Size



Arrangement of Marking Disks
for Creedmoor or Elliptical Targets.



Soule's Target Index.



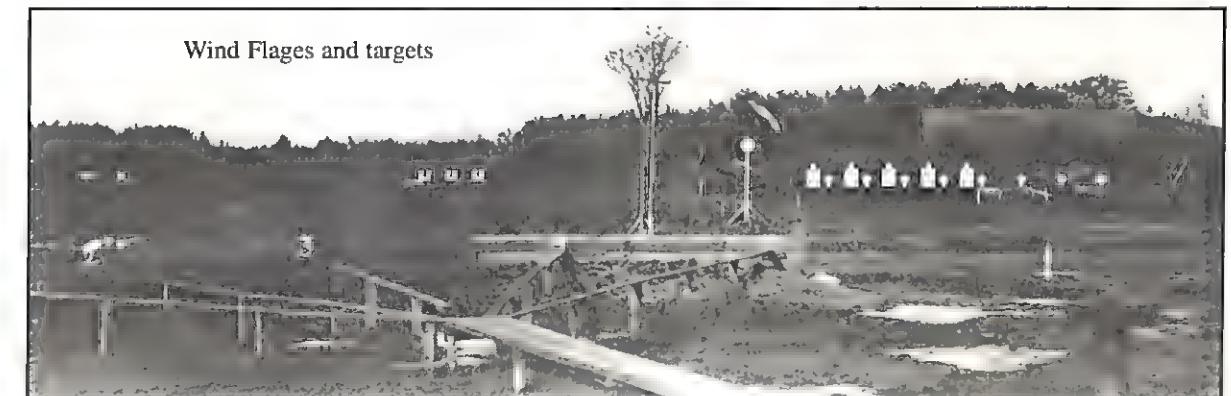
1-Indicator Plug.

2-Indicator.

Combined Marking Disks and Brush.



Target Clock



Wind Flages and targets

Laying Out a Range and Butts

Most riflemen desire a rifle range which affords comfort, and is favorably located for good shooting. Criticisms have sometimes been made on the arrangements of modern rifle ranges, and claims put forth that the conditions are unlike what would be found in hunting or warfare. Much of the shooting done on American rifle ranges is with target rifles, and by persons who indulge in it for the love of rifle shooting as a sport. Many do not care to kill game, have no interest in implements of war, but admire rifle shooting and desire to make as fine scores as is possible, with every known appliance to aid them. The rifle to them is a fine instrument which requires great skill to handle dexterously, and it is only as a pastime that they shoot it. They require the finest rifle that can be procured, and will make considerable of a sacrifice to secure the best, and stop at no reasonable expense if they can procure a device which will aid them in making better scores. There are others who shoot hunting and military rifles, who desire every favorable condition they can secure when practicing or testing rifles and ammunition. Almost every person who shoots a rifle on a rifle range, desires it located as free as possible from air currents, and where one will not be exposed to the elements when shooting. A rifle range should be located if possible in a flat open country, or where there are no ravines or gullies crossing the range, for currents of air sweep through which deflect the bullet in its flight. It is desirable to have all of the targets located so that the shooting is toward the north; for, if located east, the morning's sun will shine in the face of the shooter; if located west, the afternoon's sun will prove troublesome. If possible, place the targets so as to have a natural backing; a hill or rising ground will save building a bank. Some rifle ranges are built with the targets for 200 to 1,000 yards side by side. I think this should be reversed, if possible, and all the firing-points side by side and the targets set back to the proper points this would prevent accidents, which might occur from passing from one range to another. Owing to the decline of long range rifle shooting, there are but few ranges in America which include the thousand yards.

In the opinion of most riflemen, there is no arrangement so safe and satisfactory for the marker as a pit below the target. The targets generally used beyond 200 or 300 yards are the first and second class Creedmoor or U. S. Army targets, and iron, paper or canvas, are the materials from which they are usually constructed from.

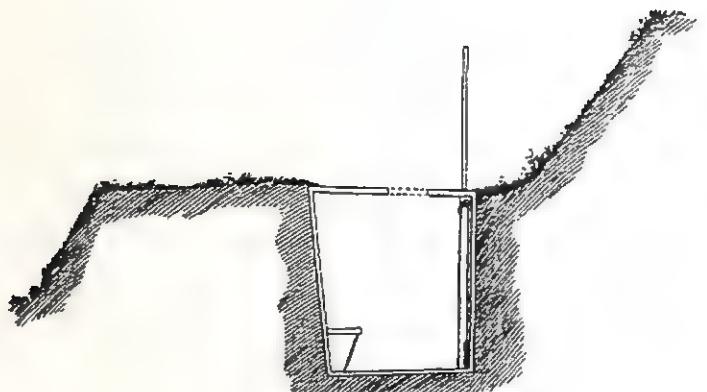
After selecting a site for a rifle range, clear away all shrubbery which would interfere with sighting, and measure with great care the distances required. Do not resort to pacing the distance, but use a measuring line; a steel tape is preferred. When the distances have been accurately measured the pits can be dug. The fortifications thus erected are called the butts, and inside the butts, the pits. The butt at the top should be at least five feet wide and level at that point. If means permit, pave and wall the pit with brick or stone. It is not necessary to have fine masonry; stones similar to those used in building stone walls may be used. If such material is not procurable, use logs, as by the use of stone or logs the pit will keep its shape, and the sides will not be so likely to cave in and crumble away. When this is omitted it is less secure and always untidy. Arrange the bottom of a pit so the water can run off and not stand in the bottom, rendering it damp, uncomfortable and unhealthy. Back of the pit it is desirable to have another embankment and the front and rear butts covered. The length of the butts are governed by the number of targets; the height, measured from the bottom of the pit to the top of the butt, should be not less than eight feet. The butt should be watched, and any washing away by rain should be at once repaired. The space between the butt and rear embankment should be about five feet, and the intervening space covered or roofed with boards, cutting away a space for the targets, and to enable the marker to watch for the shots; the width being determined by the size of the target.

With the butts constructed and the pit covered, the arrangement of the targets can be commenced. If the targets are to be constructed of iron it is usual to procure slabs of the desired height and width. It is easy to secure the proper length, but generally two or more slabs are necessary to obtain the required width. The iron generally used for targets is about one inch in thickness. The slabs are erected by propping up with iron bars. After erecting the targets they are painted white and the bull's-eye and lines drawn or chiselled on the target and the bull's-eye blackened.

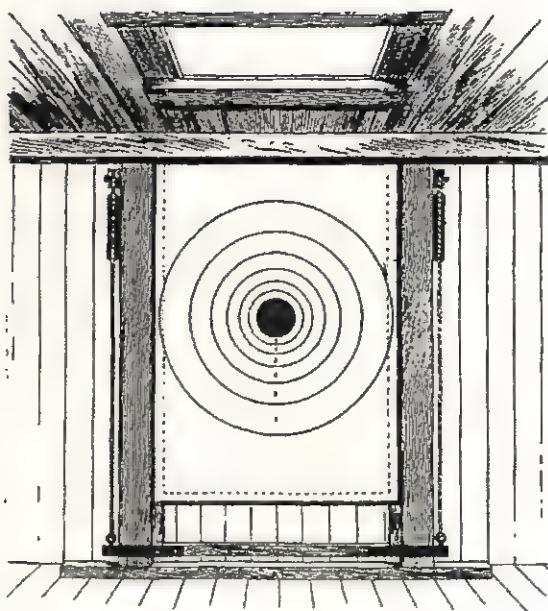
The iron target is rapidly disappearing in America, and it should have been abandoned long ago. It is more dangerous than the paper target, on account of flying lead, and a trap must be placed in the cover of the pit, which it is necessary to close before each shot, raising afterward, and with a marking disk, one side of which indicates the value of a shot, the other arranged with a brush to paint out the shot. Whenever this trap is opened the marker in the pit is in danger; for, if a shot strikes the target, a shower of lead flies and a portion of it will pass down through the trap, which is liable to cut the hands and face of the marker and perhaps destroy his eyesight. It matters not how great care is exercised by clubs, there is a liability for the best and most careful rifleman to shoot on the wrong target and to shoot before the trap is closed, although a danger signal is used; it has been done hundreds of times and markers severely injured. Besides this, it is difficult to keep an iron target in good condition, especially when many are shooting, such as in large tournaments. The bull's-eye will become irregular in shape, and it is quite difficult and perhaps impossible to tell whether a shot touches it or not. In rainy weather the black paint will run, and often oblige a cessation of the shooting. As all these faults became known, American riflemen cast the iron target aside, and its place has been supplied by paper targets, which are now almost universally used; so much so that a detailed description of the iron target seems unnecessary. The arrangement of using paper targets, which has given the best satisfaction on the principal ranges, is as follows.

A frame of the width of a full target and about two feet longer is constructed. It is made of pine wood, one and a half or two inches in thickness and three inches wide. The object of making the frame longer than the target is in order that it may extend into the pit when the target is raised, making it easy for the marker to draw down to plug or paste the shots. A coarse stout cloth, usually gunny cloth, is tacked tightly to the frame; over this is tacked a covering of white cotton cloth; after which the paper target is pasted on. Very thorough trials of the different modes of arranging targets have been made at Walnut Hill and elsewhere, and it has been decided that no arrangement is as desirable as the window sash device. A frame similar to that used for windows is constructed, enabling the marker to raise and lower the target as he would a window.

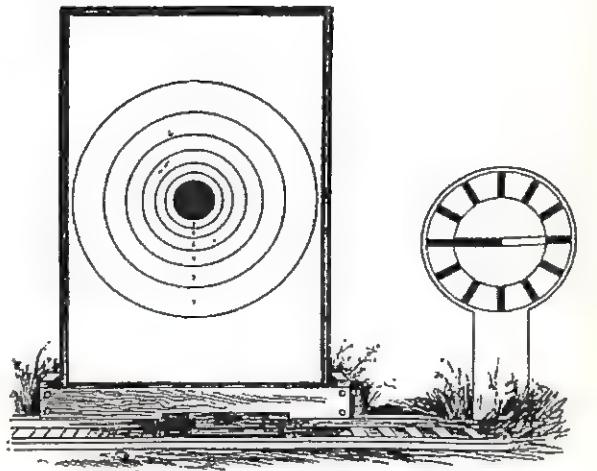
A system of double targets was for some time in use, which was thought by some to expedite Rifle shooting at Walnut Hill and shooting matches at the great shooting ranges across America.



Sectional View of Rifle Pit.



Target Lowered into Rifle Pit.



Target raised Ready for Firing.

Rest Rifle Shooting

A department of sport that finds favor in America almost exclusively is rest shooting with a rifle. To many this sport seems uninteresting, but that it is fascinating to others, and not a few of them, is apparent from the increased number of devotees to that department of rifle shooting which each new year shows. Rifles the world over are tested by rest shooting, and the best informed riflemen readily accept that manner of shooting as the most reliable and positive. Some persons who possess considerable skill, as offhand rifle shots, think that to shoot a rifle with a rest requires no particular skill, and with people in general this belief is common. As a matter of fact the skill shown by some of the prominent rest shots is in every way equal to that displayed by our famous offhand shots.

Two facts seem clearly established; namely, that the sport of rest shooting is very fascinating, and that it takes a very high order of skill to excel in that department of sport. We are often asked if there is anything practical about rest rifle shooting. We have replied to such queries as we will repeat here. There is a practical value to this style of shooting. A few years ago riflemen were satisfied with a target rifle that would place its shots in an 8-inch bullseye. Many American breechloading rifles would not shoot as well as that. When rifles and ammunition made such a performance commonplace, riflemen adopted finer targets; rifles and ammunition were then developed to make the possible on the finer targets. Several changes in targets were made, and each change, it was thought, placed the possible just beyond the capabilities of rifle, ammunition, and marksman. But the seeming impossibility stimulated rest shooters, and it has been demonstrated that the arm, ammunition, and shooter are capable of making the possible on the finest target in general use.

In accomplishing this, certain practices have become recognized as conducive to superior accuracy and many of them have been adopted in arms and ammunition for the offhand target shooter, the hunter, the military, both for the rifle shot from the shoulder and for the cannon. We know much more about arms and ammunition than we did a decade ago, and have gone ahead in strides during the past twenty-five years. We attribute much of this progress to the knowledge gained from rest shooting.

In writing of rest shooting we are reminded of the progress toward perfection. When the sport of rest shooting from the shoulder was introduced as a regular department of sport at the Massachusetts Rifle Association, the smallest ring in the target used was 3.36 inches in diameter, and to place a series of ten shots on and within that circle was thought to represent the full capabilities of rifle, ammunition, and man. in this connection it may be interesting to state only recently one of the largest rifle manufacturing companies in America refused to accept an order for a rifle and guarantee that it would place ten shots within a 3-inch circle when shot at a range of 200 yards at rest.

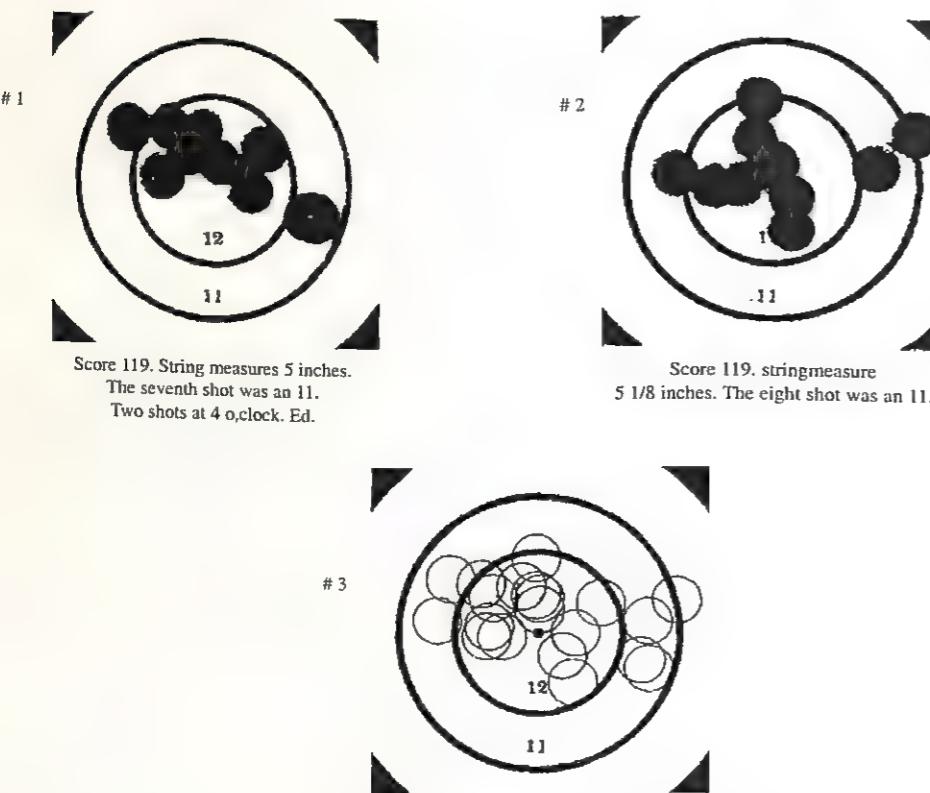
The making of a perfect score on a 3.36 carton, however, became so common as to excite no comment. Several perfect scores would be made by an individual in a single afternoon. Two rings were then placed within the 3.36-inch ring, which measure 2.23 and 1.41 inches in diameter respectively, and this is the center of the target rest rifle shooters use today. Three perfect ten-shot scores have been made on this target, all by H. L. Willard, of the Massachusetts Rifle Association.

The rifle-shooting world has been greatly astonished at Mr. Willard's repeated brilliant performances, because they demonstrated what was regarded as impossible. It might be well to add here that probably no rifle manufacturer in America (very likely in the world) would guarantee to a purchaser a rifle that would do such work, and there is little risk in adding that there are but few persons who could duplicate such shooting if they had the same rifles used by Mr. Willard.

The making of a perfect score has a peculiar charm, and always excites the admiration of riflemen; but sometimes a performance just short of perfection teaches about as much or even more, especially if a longer series of shots is made. To illustrate: Last week at Walnut Hill, Mass., on a

regular shoot day, E. E. Patridge, the well-known expert all-round rifle and pistol shot, scored consecutively, two scores of 119 out of a possible 120. A copy of the two scores, exact size, are shown in diagrams 1 and 2 while in No. 3 the twenty consecutive shots are plotted on in one diagram.

This score of twenty consecutive shots will be readily accepted by riflemen as evidence of the possibility of maintaining extreme accuracy for a long series of shots. Perhaps this is as good an illustration of the great accuracy of American up to date target rifles shot with the rest from the shoulder as has yet been offered.



Plot of the two scores given above, showing twenty consecutive shots at 200 yards. rest, each score of ten shots counting 119 out of a possible 120 points. Shot at Walnut Hill range Sept. 14 in the rest championship match, by E. E. Patridge. Scored by Carey. flange Master Kendall was also present and scored part of the shots, all of which were spotted with a telescope. Mr. Patridge used a Ballard Winchester rifle caliber. chase patched bullets, a telescope sight made by H. L. Willard bench rest. rifle held to shoulder. The conditions were nearly perfect. A slight east wind was blowing, but at times its force diminished, causing the 11's in each string.

A New Rifle and Cartridge

June 12, 1894. I have recently had the pleasure of adding to my outfit a new rifle and cartridge which I think will please all lovers of the smallbore as much as it has the writer. The rifle is a new model (1894) of the Stevens Ideal rifle, which was brought out last year. The arm is somewhat changed in shape and is greatly improved in several points, among which are: It has a solid frame, all in one piece of metal; no side plates. In appearance it is something like the old, popular Ballard frame, but much superior in its action, it has straps running back from the solid frame, which are let into the wood of the stock, and through these is firmly screwed top and bottom. The barrel, in all calibers except the .22, is threaded into the frame like other solid frame rifles-like the Sharps, Winchester single shot, etc., but turns easily, so it may be taken out or put in with the hands. When in place a set screw holds it firmly; so immovable is it then that I do not hesitate to pronounce it the most solid attachment I have ever seen. It is, however, attached and detached quickly.

The barrels are made to gauge, and are interchangeable, thus adding convenience to its solidity, the new model frame has its sleeve shortened to one and a half inches, greatly improving its appearance. The barrels will be made in three weights-light, medium, and heavy. The link which connects the lever and breech-block is so constructed that by taking out the pins and reversing it, the lever is made to set the hammer at full instead of half cock, which is convenient for those who are accustomed to repeaters or wish quick work. The frame is case hardened and beautifully mottled in colors pleasing to the eye.

Taking it all in all, I believe it to be the best single shot smallbore in the market, and I cannot see a single fault, my rifle is the third one of the kind ever made, and is a beauty. Some time ago Mr. R. Harwood conceived the idea that there was room for a good, serviceable .22 caliber central fire cartridge for small game shooting, and set himself about the task of producing such a one. The new shell is on the same lines as the .25-20 central fire, but is drawn down a little at the mouth to take a bullet of .230 caliber. The shell holds about 20 grains of powder, and will be made to use Nos. 1, 1 1/2, 2, or primers, as desired.

These shells can be furnished for the present by the J. Stevens Arms and Tool Company or by Mr. R. Harwood, of Somerville, Mass. The bullets used are of 63, 55, and 48 grains, which can be cast in the molds made by the Ideal Manufacturing Company.

It will be seen at a glance that with a charge of 16 to 20 grains of powder and a bullet of 63 or 55 grains that high velocity and flat trajectory, as well as extraordinary killing power, is produced. Those who, have seen it are much pleased, and one gentleman facetiously remarked, "That's a regular Hornet!" The name sticks, and the new cartridge is already known as Harwood's Hornet.

The enterprise and readiness to adopt new and useful articles to manufacture, always shown by the J. Stevens Arms and Tool Company, as in this case, is also found in the Ideal Manufacturing Company. This firm responded promptly when the new cartridge was laid before it, and the Ideal Company set itself to work and made a sample loading set, and sent on for inspection and alterations. The tool I have is the No. 3 Special style shown in the Ideal hand book. This company informs me that it will make the tools in the regular No. 4 style also. This last seems to be popular on account of compactness. Personally I like the one I have better, using a separate mold for casting. I can set the bullet at different depths in the shell if desired; but for hunting, the No. 4 style is good.

The rifle cranks of our S.B.C. army appreciate the efforts of Mr. Barlow, the manager of the Ideal Company, to meet all their requirements. Its new Hand Book for 1894 will be ready soon, and many new and interesting notes will be added to the mine of information it already has.

The new Ideal rifles will be made to take the standard cartridges, same as before, and the other patterns, made by the J. Stevens Arms and Tool Company, may be had to take the .22-20 Hornet cartridge. A good feature of this shell is that .22 caliber centralfire rifles may readily be rechambered to use it, and with its increased powder charge it is believed the 48 and 55 grain, as well as the ordinary 45 grain bullets may be made to spin well and give greatly increased power for game shooting. Many barrels now using the .22 long-rifle and .22-7-45 may easily be made to handle this shell by rechambering. The bore is the same size in all, As the Ideal Company cuts its grooves deep in the bullets there seems to be no slugging or leading of the barrel.

Mr. Reuben Harwood, of Somerville, Mass., has worked up this cartridge from the beginning. Although against the popular idea of shooting excessive charges of powder without cleaning, the cartridge has been made to shoot well almost from the start.

At present 4 grains of nitro powder and 16 grains black powder are used, being the equivalent of about 24 grains of black powder. A recent trial was made by the writer with this rifle at Walnut Hill range. Thirty-seven shots were fired in testing without cleaning; then the rifle was handed to Mr. J. Hadley. He fired ten shots more, at 50 yards, placing his ten shots in the 2 inch circle. One wipe with the rod left the barrel bright and clean, the rifle was then taken to the 100 yard point, and the ten shots went into the 4 inch circle, six of them in a 1 1/2 inch group.

But its strong points are speed and its attending very flat trajectory. This we tried at 100 yards and 50 yards. We found its drop at 100 yards, when sighted at 50 yards, to be about 1 1/4 inches, or 3/4 inch less than the .25-20-77. If the sights are set correctly at 65 or 70 yards, it is found to make a practically flat path (only 3/4 inch) all along the line up to 100 yards.

We shall make and report more tests with the new cartridge and rifle. So far it is thought the 55 grain bullet will be the best for same shooting. I would add that thus far all our tests have been made with the bullet seated down, over all grooves, in the shell, and under strictly hunting conditions. It is Mr. Harwood's object, first and foremost, to produce a superior cartridge for small game shooting, and, I may safely add, he has succeeded. No crimp is used, but, like the .25-20, the bullets are seated tightly in shell without crimp.

Mr. Harwood has anticipated all the wants of riflemen who equip themselves with this rifle and cartridge, and is prepared to furnish molds and loading tools, cartridges, shells, and bullets, so no delay or disappointment may follow. In due time the factory product will probably be on the market; but just at present this new Hornet will be furnished as stated above, carefully hand loaded. He will cheerfully furnish information to those who write him and enclose a stamp for reply.

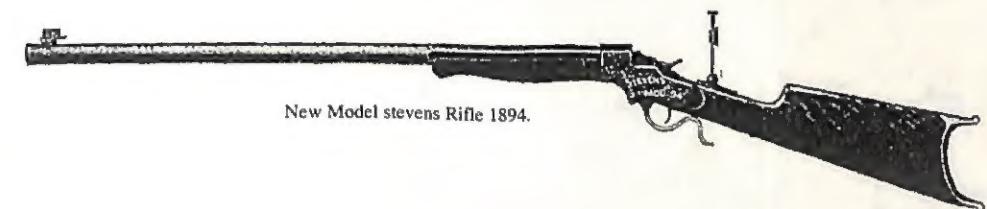
Last, but by no means least, I will say that I have the new rifle mounted with one of L. N. Mogg's best telescope sights, with illuminated cross hairs. It is a fine instrument. The rear mounting has a new and simple device for a stop pin, to set the sights at a given point blank, something on the principle of the Lyman stop pin it works well.

This Hornet cartridge seems to be a strong rival of the .25-20-77, with the indications that for many uses the little one will come out ahead (no pun) for small game, vermin, etc. For crows, hawks, ducks on the water and such shots, it is believed that it will prove a killer. It may tear some, but its small diameter cannot allow it to smash game badly. It is a thoroughly effective, practical

smallbore express. In sighting, no change in elevation seems necessary for the first twenty rods, which is about as far as small game, etc., is usually killed. This cartridge is no "toy," as is frequently remarked of the .22 caliber, but is full of business principles from foundation to date.

The J. Stevens Arms and Tool Company report it is selling a great many of the new pattern rifles, and that It is well liked. Many letters of praise are received by this company daily.

Mr. Harwood states that he is prepared to rechamber .22 caliber central fire rifles to take the Hornet shell, and it is believed that it will become one of the most popular centre fire shells now made. R. Boston, Mass.



New Model Stevens Rifle 1894.



Harwood's Hornet Cartridge.



48 grains
55 grains
63 grains

Walnut Hill Member's



J. B. Fellows



G. R. Russell



S. E. Briggs



O. M. Jewell



Orrin R. Dickey



F. J. Rabbeth



H. M. Pope



Adolph Strecker



A. H. Pape



D. L. F. Chase



Dr. S. A. Skinner



G. R. Harris



G. H. Wentworth



J. E. Kelley



Eugene E. Patridge



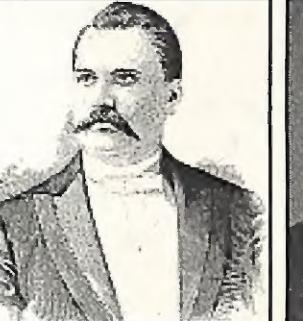
N. C. Nash 2nd.



F. B. Crownshield



Mr. F. E. Bennett



Mr. W. W. Bennett



Bill Mead



Thomas Anderton



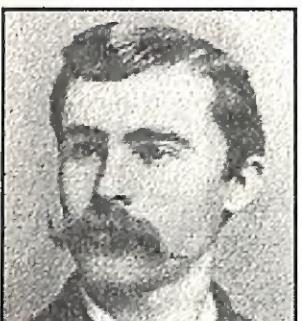
F. W. Mann



H. T. Rockwell



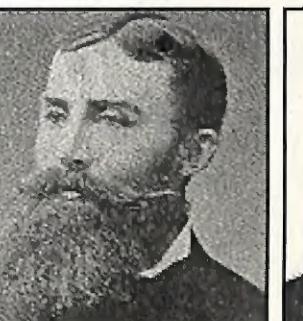
E. P. Matson



H. L. Willard



Salem Wilder



W. M. Farrow



James N. Frye



J. Busfield



N. S. Brockway



E. A. Leopold



John Buccie

The Stevens Wind Gauge Vernier Sight.

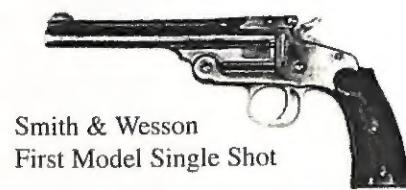
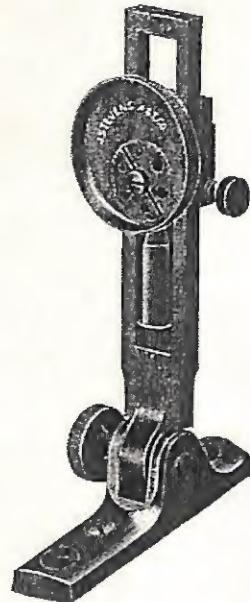
1898. Whatever else may be said unfavorable to the wind gauge sight commonly found on the muzzle of the target rifle, it is of necessity a sight that extends high above the barrel. When the rear sight cup is placed at the proper distance above the base, to correspond with the high front sight, the line of sight is so far above the axis of the bore that errors in holding or in canting the rifle to one side may cause shots to go where least expected, on the target. Often these wild shots are called unaccountables by the marksman who fired them. The use of a spirit level on the front sight will not always prevent the above named errors in off-hand shooting. Where the firing-point is under cover, and in the deep shade of roofs or bulkheads, one's eyes must be sharp indeed to see the spirit level when it is used, at the present time some target shooters, but not all, use the spirit level in off-hand work.

A new rear sight which possesses this and other advantages has recently been perfected by the J. Stevens Arms and Tool Co., of Chico, Pee Falls, Mass. This sight presents a neater appearance than the ordinary midrange vernier. The thumbscrew at the top is not used, and the stem is shorter.

The elevation is secured by the rotating knurled thimble in the center of stem, under eyecup. Windage is obtained by means of the thumbscrew on right side of eyecup. The eyecup is first loosed, when by turning the thumbscrew a slide motion of one-eighth of an inch either way may be had.

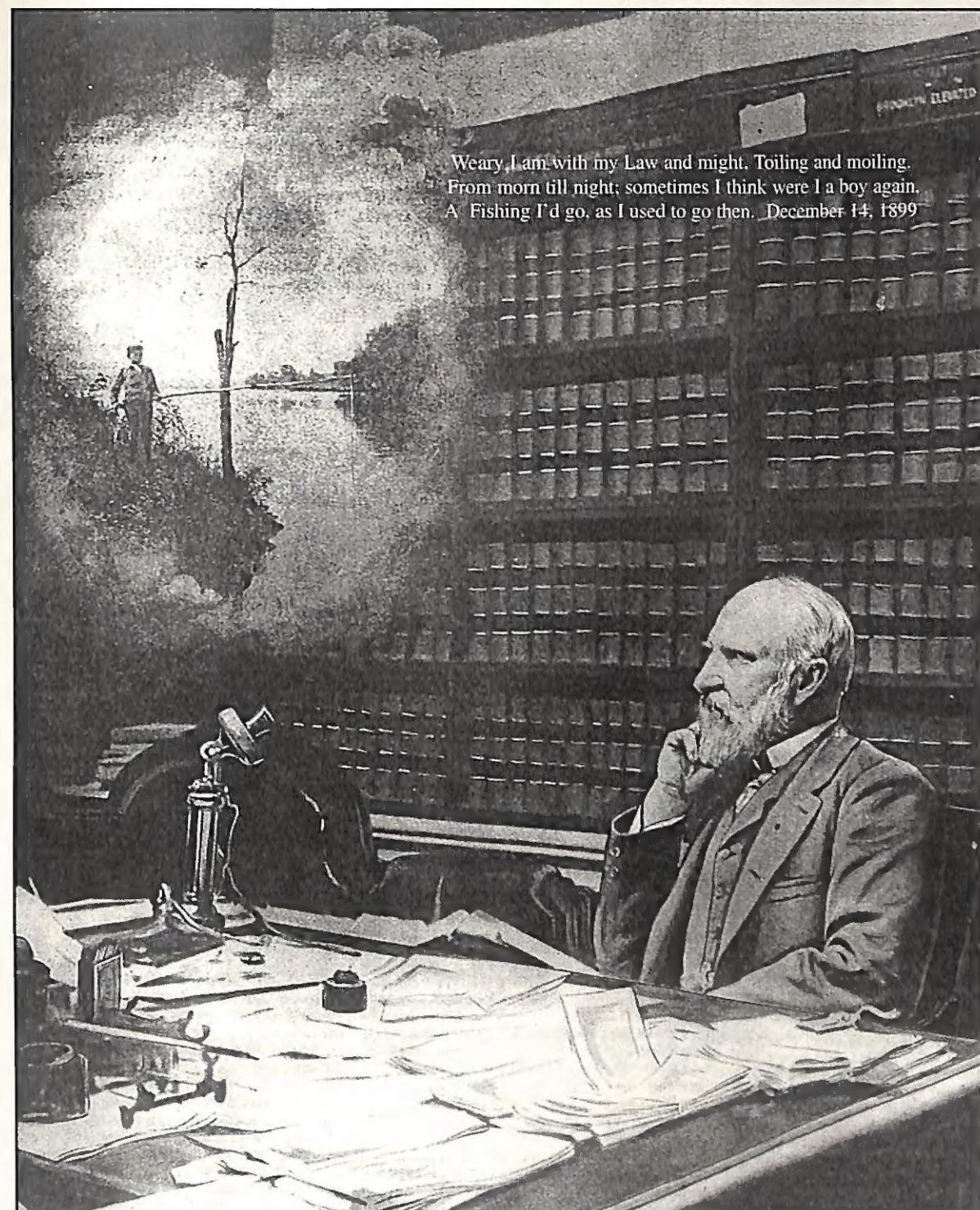
With the wind gauge on the vernier a lower base muzzle sight may be used, thus permitting the vernier to be shortened. The danger of adjusting a muzzle wind gauge on a loaded rifle is also obviated.

The Stevens vernier wind gauge sight has a combination eyecup, which permits several changes in size of the aperture. The sight is made with extreme accuracy and is finely finished. At present the new sight is made for Stevens Ideal rifles, only. The price of this sight with combination eyecup is \$6, and with plain eyecup \$5,



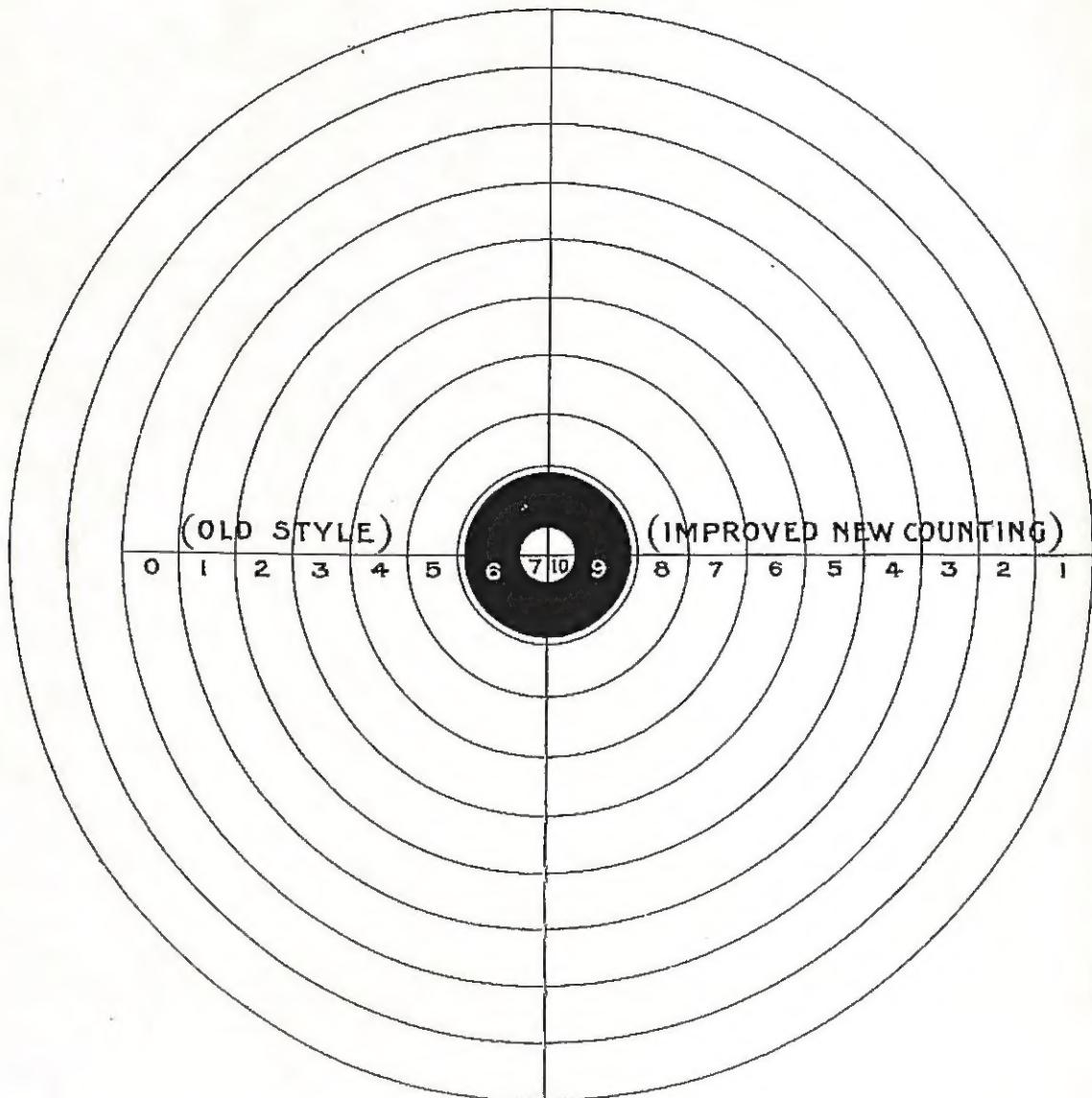
Smith & Wesson
First Model Single Shot

A Dream of Fishing 1899.



Weary, I am with my Law and might, Toiling and moiling.
From morn till night; sometimes I think were I a boy again,
A Fishing I'd go, as I used to go then. December 14, 1899

The First French Challenge to America in 1900.



The modified Gastinne-Renette target which the French committee in charge of the International Revolver match asks be substituted for the half of the match for which it names the conditions. The figures at the left show the old style of counting; those at the right the proposed new counting. The request of the French committee will be granted. This target is the one that will be used for one-half of the International Revolver match. It will be shot on at 16 meters, 53 feet.